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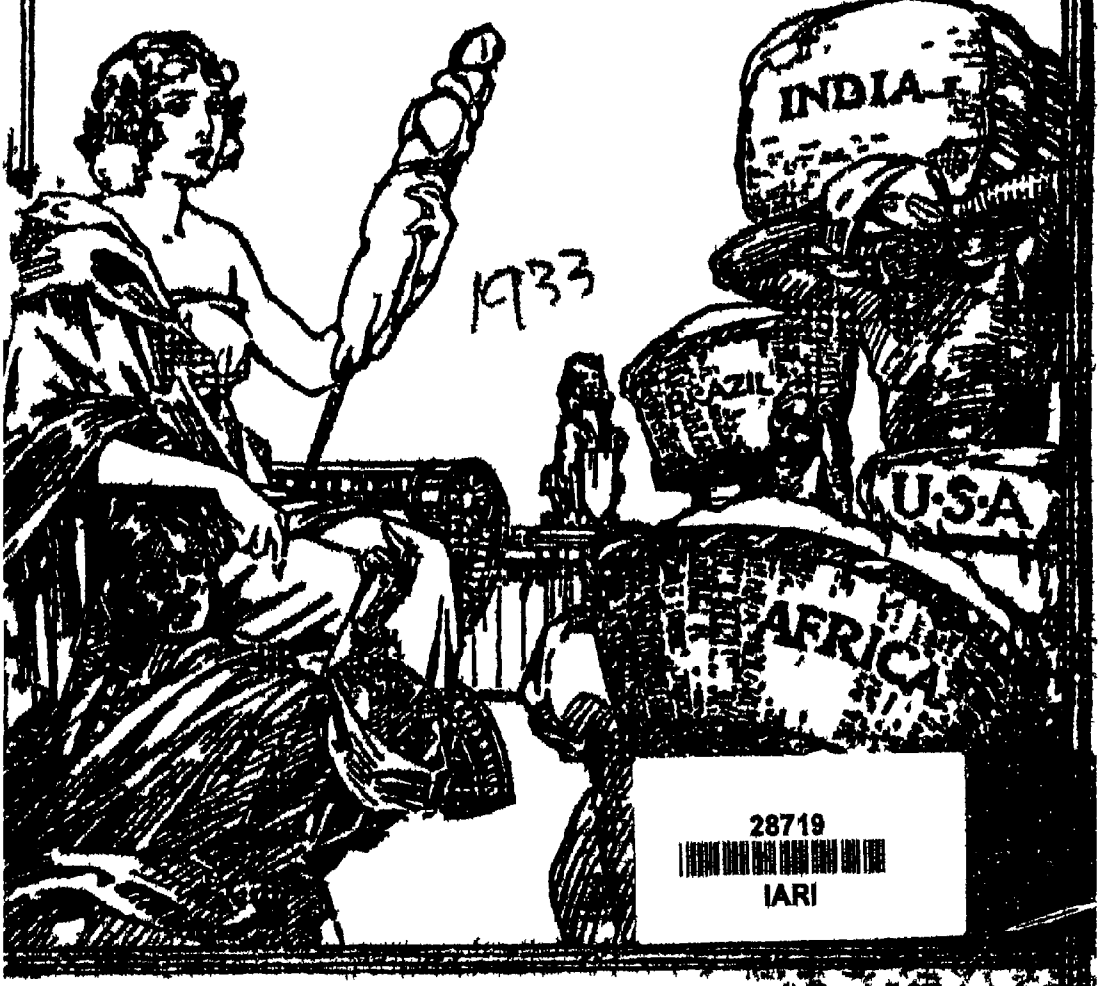

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ALPHABETICAL INDEX

TO THE

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NOS. 37 TO 40, REPRESENTING VOLUME X.

This Index should be inserted in BULLETIN No. 41. *The use of this carefully prepared Index will be found extremely valuable in case of reference to the hundreds of questions dealt with in the* INTERNATIONAL COTTON BULLETIN.

PAGE

- A.C.C.A., Future Plans of 375
- Acreage and Yield per Acre, 1931 (U.S.A.) 62
  - In India 404
  - In Texas (1932) 379
  - Prospects in U.S.A. 381
  - Reduction in U.S.A. ...65, 198, 381
  - Reduction Measures in Texas ... 71
  - Report, India 93
  - " U.S.A. 508
  - Restriction in Egypt . . . 215
  - Of Sakel 79, 211
  - Statement of Secretary Hyde ... 198
- Airships, Cotton for (U S A.) ... 591
- Alexandria Testing House 520, 529, 542
- Algeria :
  - Cotton Growing 43, 173, 353
- American Cotton : 33-77, 188-209, 363-385, 498-523
  - Moisture in 207, 303, 442
- American Cotton Co-operative Association 375, 517
- Amritsar, Hand loom Industry in ... 279
- Annual Meeting of Durene Association 283
- Arbitration, Rules of 308
- Arbitrators, Revised Panel of 168, 443
- Argentine :
  - Cotton Growing ... 43, 173, 351, 401
  - Exports 402
  - Yield per Acre of Cotton 137
- Artificial Cotton in U.S.S R. ... 137
- Artificial Humidity 135
- Australia :
  - Cotton Growing 174, 359
  - Cotton Yarn Duties 593
  - Yield per Acre 137
- Austria :
  - Exports of Cotton Goods 20
  - Imports of Cotton Goods ...20, 470, 471
  - Spindles 470
  - State of Trade Reports ...20, 337, 470
- Automatic Looms v. Ordinary Looms 417
- Average Yield per Acre in Various Countries 137

- Baling Material, Cotton 206
- Barrage, Sukkur 236
- Belgium :
  - State of Trade Reports 5, 31, 151, 340, 472
  - Customs Unions in the Woollen Industry 599
  - Wage Reductions 340, 473
- Boll Weevil 502, 514, 520, 521
- Brazil :
  - Cotton Growing 175, 374
  - Imports 453
  - State of Trade Reports ...32, 175, 354
  - Yield per Acre of Cotton 137
- British Cotton Growing Association... 485
- British West Indies : Cotton Growing 43
- British Tariff on Cotton Goods ... 283
- British Textile Exhibition 281

- California : Cotton Growing ... 103
- Capacitance Hygrometer, Test of Dr. Balls' 538
- Carry over of Egyptian Cotton ... 83
- Census of Production, England ... 250
- China :
  - Cotton Growing 44, 175, 355
  - Cotton Industry in 579
  - Cotton Trade Statistics 581
  - Imports of Cotton Goods 133
  - Looms 579
  - Spindles 22, 519, 581
  - State of Trade Reports ... 155, 348
  - Yield per Acre of Cotton 137
- Chosen :
  - Cotton Growing 45, 492
  - Exports of Cotton Goods 493
  - Imports of Cotton Goods 493
- Classification of the World's Cotton Crops 271
- Cloth Production in England (1924 and 1930) 263
- Colombia : Cotton Growing ... 45
- Committee's Communications 1, 153, 301, 469
- Comparisons of International Cotton Grey Cloth Prices ... 122, 587
- Conditions and Prospects of U.K. Trade in India (Ainscough) ... 440
- Conference, International Wool ... 284
- Consumption and Stocks of Foreign Cotton in U.S.A. 134
- Consumption of American Cotton, Estimated 209
- Consumption of Articles Manufactured from Cotton 24
- Consumption of Cotton, Prospects of a Revival in 27
- Consumption of Egyptian Cotton ... 530
- Consumption of Egyptian Cotton by U.S.A. 223, 559, 585
- Consumption of Fibres (U.S.A.) ... 443
- Consumption of Indian Cotton ... 93
  - By India 94, 564

PAGE
Consumption of Sundries Cotton 106
Control of Cotton Acreage (U S A) 109
Correction 115
Cork Rolls for Cotton Spinning 113 250
Cost of Production (U S A) [illegible]
Cotton Area (Egypt) 557
Cotton Acreage and Production World 184 7
Cotton Bales Weights of (U S A) 375
Cotton Baling 3
Cotton Baling Material [illegible]
Cotton Belt Visit to 61
Cotton by Road Rail and River (U S A) [illegible]
Cotton Cloth New Use for (U S A) 111
Cotton Cloth Production (U S A) [illegible]
Cotton Crop Receipts (U S A) [illegible]
Cotton Consumed in America Egyptian [illegible]
Cotton Consumed India [illegible]
Cotton Consumption of Article Manufactured from [illegible]
Cotton Consumption World 138
Cotton Crop
  Egypt [illegible]
  U S A [illegible]
Cotton Durability of 573
Cotton Duty, Indian [illegible]
Cotton Fibres in U S S R Production of [illegible]
Cotton, False Packed [illegible]
Cotton Farm Board 376
Cotton for Airships (U S A) [illegible]
Cotton Futures Stamp Tax on Sales of (U.S A) [illegible]
Cotton Gift Bill President Signs (U S A) [illegible]
Cotton Ginning Investigations (U S A) 506
Cotton Goods Best available Markets for [illegible]
Cotton Goods British Tariff on 283
Cotton Grey Cloths Prices Comparisons of [illegible] 587
Cotton Growing
  43 50 172 187 350 362 481 497
  Algeria 43 173 353
  Argentine 43 173 354 491
  Australia 171 359
  British West Indies 43
  Brazil 175 354
  Bulgaria 44
  California 195
  China 44 175, 355
  Chosen 45 492
  Colombia 45
  Cyprus 493
  Ecuador 45 493
  El Salvador 45
  Fiji Islands 182
  French Equatorial Africa 45, 356
  French West Africa 46 177 356
  Greece 46
  Haiti 46 489
  Mexico 46 177 356 493
  Mozambique 357
  New Hebrides 358
  Nicaragua 494
  Nigeria 494
  Nyasaland 47

PAGE
Cotton Growing (continued)
  Paraguay [illegible]
  Peru [illegible]
  Porto Rico [illegible]
  Portuguese East Africa [illegible]
  Queensland [illegible]
  Russia [illegible]
  St Vincent [illegible]
  South Africa [illegible]
  Southern Rhodesia [illegible]
  Spain [illegible]
  Sudan [illegible]
  Syria [illegible]
  Tanganyika [illegible]
  Turkey 181
  Uganda [illegible]
Cotton Hat [illegible]
Cotton Import Duty on
  Greece [illegible]
  India [illegible]
  Italy [illegible]
  Poland [illegible]
  Portugal [illegible]
Cotton Import Restriction Greece [illegible]
Cotton Improvement (India) [illegible]
Cotton Industry Crisis in the [illegible]
Cotton Industry Displacement of the Geographical Centre of Gravity in [illegible]
Cotton Industry in
  China [illegible]
  Czecho Slovakia [illegible]
  Guatemala [illegible]
  Latvia [illegible]
  Manchuria [illegible]
  Russia [illegible]
Cotton Industry Remedies for the Crisis in [illegible]
Cotton Mill Consumption World [illegible]
Cotton Mill Notes [illegible]
Cotton Mill Stocks World [illegible]
Cotton New Uses for 600
Cotton Policy Egyptian Government [illegible]
Cotton Pressed (India) [illegible]
Cotton Position of the World [illegible]
Cotton Production
  Guatemala [illegible]
  Roumania 371
Cotton Production and Distribution in the Gulf South west [illegible]
Cotton Production Report (U S A) [illegible]
Cotton Propaganda 28 112 285 306 533
  Egyptian 212
Cotton, Prospects of a revival in consumption of 27
Cotton Relief Measures in Egypt 211
Cotton, Sea Island 377
Cotton Shipments Egyptian 86 396
Cotton Spinning, Cork Rolls for 113 250
Cotton Stocks in Alexandria 80 394
Cotton Textiles Ten Years of (U S A) 581
Cotton Trade Statistics 126-134
  287 294 445 455 601-606
  China 581
Cotton Veneer Wall Coverings 111
Cotton Yarn Duties Australia 593
Credit Bank Agricultural (Egypt) 215
Crisis, Evolution of the 27

PAGE

Crisis in the Cotton Industry and the World Crisis (André Siegfried) ... 16
  Remedies for (R Brasseur) . . 310
Crisis in the Cotton Industry in Relation to the General World Crisis 19
Crisis, Repercussions of 23
Crop Forecast, India 402
Crop Reports
  Egypt 89, 559
  India. 97, 237
  U S.A. 74, 366, 382, 518
Cultivation of Egyptian Cotton in Russia 83
Currency Restrictions and Trade . 303
  Dr E. Zucker 320
  R A de la Beaumelle 326
  Dr. G Mylius 332
Currency Systems, Resolutions on . 7
Curtailment of Production in English Fine Spinning Section 430
Customs Unions in the Woollen Industry 599
Cyprus, Cotton Growing . 493
Czecho-Slovakia :
  Activity of Cotton Industry 155
  State of Trade Reports, 155, 340, 532, 471

Damp Cotton, Drying of (U S A) . 376
Damp in American Cotton 207, 303, 412
Damp in Egyptian Cotton 217, 387, 528
Dates of Grade and Staple Reports (U S A 308
Debenture Plan (U S A) 66
Denmark : State of Trade Reports 5, 306
Displacement of the Geographical Centre of Gravity in the cotton industry 20
Durability of Cotton 573
Durene Association's Annual Meeting 283
Dust in Card Rooms 434
Duties on Cotton Yarn, Australia . 593
Drying of Damp Cotton (U S A) ... 376

East Indian Cotton, 93 97, 225 230, 402 405, 561 567
Easy Control of Moisture Content in Cotton Bales (Dr. Balls) ... 391
Economic Conditions in Germany ... 272
Ecuador : Cotton Growing ... 15, 493
Egypt :
  Area under Cotton 557
  Acreage Restriction ...79, 211, 215
  Agricultural Credit Bank 215
  Alexandria Testing House 520, 529, 542
  Analysis of the International Cotton Statistics 530
  Carryover 83
  Consumption of Egyptian Cotton 530
    By U.S A. ... 223, 559, 585
  Cotton Crop... 218
  Cotton Relief Measures 211
  Cotton Shipments 86, 396
  Crop Reports 89, 599
  Cultivation of Egyptian Cotton in Russia 83
  Easy Control of Moisture Content 391
  Egyptian Cotton in Ukraine ... 399
  Elimination of Varieties 533

PAGE

Egypt *continued*
  Exports 80, 394, 558
  Extraction of Dust from Cotton Ginning Factories ... 536, 551
  Final Government Crop Estimate 556
  First Government Crop Estimate.. 79
  Ginning by Varieties 557
  Ginnings, 1931 218
  Government Cotton Policy ... 526
  Government Sales Policy . .. 527
  Imports 605
  Italian Purchase of Egyptian Cotton 224
  Joint Egyptian Cotton Committee Meeting 387, 525
  Maarad Cotton 393
  Market Reports ... 89, 219, 399, 560
  Market Situation (Arno S. Pearse) 387
  Minutes of Joint Egyptian Cotton Committee Meeting 525
  Mixing of Varieties... 526
  Moisture in Cotton 217, 387, 528
  Moisture Tests 528, 539
  Modern Gins 394
  New Crop 560
  Note on Probable Developments in the Technique of Moisture Tests 540
  Note on Spinning Value of New Cottons 388
  Payment for Tests 388, 529
  Possible Use of Cotton Sacking instead of Jute 530
  Renewal of Agreement with regard to Standard of Moisture ... 529
  Sakel Acreage Restriction 79, 211
  Shipments from Alexandria ... 396
  Spinning Value of New Varieties (Dr. Balls) 388
  Stocks of Cotton in Alexandria 80, 394
  Substitution of Jute Covering by Cotton Material 534
  Test of Dr. Balls' Capacitance Hygrometer 538
  World's Production of Motor Car Tyres 554
  Yield per Acre 137
Elimination of Varieties (Egypt) ... 533
El Salvador : Cotton Growing ... 45
Electricity used in English Cotton Mills 261
England :
  Census of Production 256
  Cloth Production (1924 and 1930) 263
  Curtailment of Production ... 436
  Exports of Cotton Goods, 126, 127, 129, 157, 287, 445, 447, 601
  Hours of Work 270
  State of Trade Reports, 6, 156, 307, 341, 475
Equalisation Fee (U.S.A) 66
Estimated Consumption of American Cotton 209
Estimated World Rayon Production 133, 606
Experimental Ginning Station (U.S.A.) 69
Export Duty on Cotton (Uganda) ... 182
Export Duty on Second-hand Textile Machinery (Germany) 437

PAGE

- Exports of Cotton and Cotton Goods
  - Argentina [illegible]
  - Austria [illegible]
  - Bulgaria 41
  - Chosen 103
  - Egypt 80 [illegible] [illegible]
  - England [illegible] 115 117 601
  - France 31 158 476
  - Germany 129 130
  - Italy 46 401
  - Hungary 479
  - India 36 38 [illegible]
  - Japan [illegible] 93 501
  - Peru [illegible] 131
  - Porto Rico 18
  - Russia [illegible]
  - Switzerland [illegible]
  - U S A 118
- Extraction of Dust from Cotton in Ginning Factories (Egypt) 530 551
- Evolution of the Crisis [illegible]

- False Packed Cotton 409
- Farm Board Cotton 376
- Federal Farm Board Authorises Sale of Holdings 501
- Federal Farm Board Holdings [illegible]
  - Policy 381
  - Resolution on [illegible]
- Final Government Cotton Crop Estimate (Egypt) 556
- Final Government Cotton Report (U S A) 130
- Fine Spinning Cork Rolls and 113 [illegible]
- Finland State of Trade Report [illegible]
- Fiji Island Cotton Growing 18
- First Government Crop Estimate (Egypt) 73
- First Indian Acreage Report 93
- Foreign Cottons Consumed in U S A Staple Lengths of 585
- France
  - Cotton Wage Reductions 158 306 475
  - Customs Unions in the Woollen Industry 500
  - Exports 31 158 476
  - Imports 31 476
  - Production of Yarn and Cloth 1930 31 158
  - Spindles [illegible]
  - State Assistance for Cotton Industry 269
  - State of Trade Reports 6 33 158 306 312 475
- French Equatorial West Africa Cotton Growing 45 356
- French Honour for Mr Arno S Pearse 444
- French West Africa Cotton Growing 46 177 356
- Future Plans of A C C A 375

- Geographical Centre of Gravity in the Cotton Industry, Displacement of [illegible] 20
- Germany
  - Economic Conditions in [illegible] 272
  - Export Duty on [illegible] Textile Machinery [illegible]
  - Exports [illegible]
- Germany continued
  - Imports [illegible]
  - State of Trade Reports [illegible] 31 [illegible] 307 313 476
  - Wage Reductions 311
- Ginning by Variety (Egypt) [illegible]
- Ginning Investigation Cotton (U S A) 306
- Ginning Reports (U S A) [illegible] 305
- Ginning 1931 (Egypt) 18
- Gins in Egypt Modern 335
- Grade and Staple Consumption Reports (U S A) [illegible]
- Grade and Staple Report (U S A) 111 [illegible] [illegible]
  - Date of [illegible] 308
- Grade (U S A) [illegible]
- Greece
  - Cotton Growing 46
  - Cotton Import Restriction 591
  - Import 591
- Guatemala Cotton Production [illegible]
- Gum for Textile Printing [illegible]

- Haiti
  - Cotton Growing 46 401
  - Export 46 401
- Hand loom Industry in America [illegible]
- High Draft Spinning and Indian Cotton [illegible]
- High Draft W I R System [illegible]
- Holdings of Federal Farm Board [illegible]
- Holland
  - Customs Union in the Woollen Industry 500
  - Six loom system 400
  - State of Trade Report 6 36 110 306 311 478
  - Tariff on Cotton Goods 161
  - Wage Reductions 311
- Hours of Work (England) [illegible]
- How Long? (U S A) [illegible]
- How Twist Affects Yarn Strength [illegible]
- Humidity Artificial 135
- Hungary
  - Exports 479
  - Imports 479
  - State of Trade Reports 36 161 479

- Import Duty on Raw Cotton
  - Greece 591
  - India 93 231
  - Italy 135
  - Poland 136
  - Portugal 136
- Imports of Cotton
  - Austria 29 170 478
  - Brazil 153
  - Bulgaria 41
  - China 133
  - Chosen 103
  - Egypt 605
  - France 31 476
  - Germany 129 130
  - Greece 591
  - Hungary 479
  - India 434 603
  - Latvia 235
  - Poland 121
  - [illegible] 405 603

PAGE
Imports of Cotton—*continued*
  Switzerland 55 181
  U.S.A. 151
Imports and Production of Cotton Goods in Roumania 71
Import Restrictions (Greece) 591
Import Trade of India 90 603
Index Nos. of Retail Prices (U.S.A.) 517
India
  Acreage 104
  Acreage Report 93
  Conditions and Prospects of U.K. Trade with (Ainscough) 110
  Consumption of Indian Cotton 94 504
    By U.S.A. 586
  Cotton Duty 507
  Cotton Improvement 227
  Cotton Pressed 95 105
  Crop Reports 97 237
  Exports 96 238 9
  First Indian Acreage Report 93
  Government Crop Forecast 10
  Hand loom Industry in Amritsar 73
  High Draft Spinning 561
  Import Duty on Cotton 95 34
  Import Trade of 3
  Imports 151
  Indian Central Cotton Committee 104
  Indian Cotton Consumed 504
  Long Staple Cottons in 231
  Malpractice 105
  Market Reports 97 567
  Marking of Bales 105
  Pink Boll Worm 104
  Production of Yarn and Piece Goods 565
  Quantity and Count spun in India 566
  Spindles
  Sukkur Barrage 36
  Third Official Cotton Forecast 225
  Yield per Acre 137
Indian Central Cotton Committee 104
International Cotton Committee Meetings 1 301
International Cotton Grey Cloth Prices, Comparisons of 122 587
International Cotton Statistics 98 106 406 415
  Analysis of 330 552
International Courts of Arbitration 148 443
International Wool Conference 284
Italy
  Import Duties on Cotton 135
  National Contract 595
  Purchase of Egyptian Cotton by 224
  State of Trade Reports 6 37 162 307 315
Japan
  Exports 131 132 163 293 591
  Increase in Labour Efficiency 270
  Production 591
  Spindles 22
  State of Trade Reports 161 480
  Yarn Production Curtailment 437
Joint Egyptian Cotton Committee Minutes of Meetings of 387, 525
Jute Covering, Substitution of by Cotton Material 534

Labour Efficiency Increase in Japan 270
Laedrich, Rene 139
Latvia, Cotton Industry in 251
Lancashire Cotton Corporation Looms Test 417
  Cloth 424
  Comparison of Production Costs 423
  General Descriptions of Looms used 418
  More Looms per Weaver 428
  Waste 424
  Yarn Problems met with 424
Lancashire Cotton Industry, Scheme for Regulation of Production in Egyptian Section of 592
Long Staple Cottons in India 231
Looms
  Automatic v. Ordinary 417
  China 573
  World's 13
Lummus Gyrator Opener Cleaner and Conveyor 574

Maarad Cotton 395
Malpractice in Indian Cotton 105
Manchuria Textile Manufacture in 55
Markets for Cotton Goods 25
Market Reports
  Egypt 85 215 333 563
  India 97 567
Marking of Bales (India) 105
Meeting of International Cotton Committee 1 301
Meeting of Joint Egyptian Cotton Committee 387 525
Mexico Cotton Growing 40 177 350 403
Meynell High Draft Spinning System 43
Minutes of International Cotton Committee Meeting 1 301
Minutes of Joint Egyptian Cotton Committee Meetings 387 525
Miscellaneous 135 215 274 286 410 441 595 600
Mixing of Varieties (Egypt) 526
Modern Gins in Egypt 391
Moisture Content, Easy Control of (Egypt) 391
Moisture
  In American Cotton 207 412
  In Egyptian Cotton 217 387 528
  Payment for Tests of 358 529
Moisture Tests
  Of American Cotton 303
  Of Egyptian Cotton 528 539
More Looms to a Weaver 428
Mozambique Cotton Growing 357

National Contract, Italian 595
National Cotton Week (U.S.A.) 444
Net Weight Bill for Cotton (U.S.A.) 374
Net Weight Contract for Cotton Covered Bales 302
Net Weight Contract for Raw Cotton 368
Net Weight Cotton Contract (U.S.A.) 205
New Crop (Egypt) 560
New Hebrides Cotton Growing 358
New Persian Textile Mills 503
New Uses for Cotton (U.S.A.) 114 600
New Winding Machinery 109
Nicaragua Cotton Growing 494
Nigeria Cotton Growing 494
Northrop Weft Replenishing Device 569

PAGE

Norway: New President 469
Note on Probable Developments in the Technique of Moisture Testing (Egypt) 559
Note on Spinning Value of New Cottons (Egypt) 388
Nyasaland: Cotton Growing ... 17

Obituary:
  René Laederich 439
  J. R. MacColl 286
Oil Spraying of Cotton 435
Ordinary versus Automatic Looms 417

Panel of Arbitrators, Revised 168, 443
Paraguay: Cotton Growing 47, 173, 494
Past Presidents, Status of 302
Payment for Moisture Tests (Egypt) 388
Persia: New Textile Mills in ... 593
Peru:
  Consumption of Cotton by U.S.A. 586
  Cotton Growing ... 47, 178, 359, 494
  Exports 47, 178, 494
  Yield per Acre 137
Piece Goods and Yarn in India, Production of 565
Pink Bollworm:
  In Haiti 491
  In India 104
Poland:
  Import Duties on Cotton 436
  Imports 121
  Production and Import of Cotton Yarn 121
Porto Rico:
  Cotton Growing 48, 179
  Exports 48
Portugal:
  Import Duties on Cotton 436
  State of Trade Report 348
Portuguese East Africa: Cotton Growing 495
Possible Use of Cotton Sacking instead of Jute (Egypt) 550
Preliminary Final Cotton Crop Report (U.S.A.) 189
President Signs Cotton Gift Bill (U.S.A.) 502
Probable Weevil Activity (U.S.A.)... 378
Production and Import of Cotton Yarn (Poland) 121
Production and Imports of Cotton Goods in Roumania 271
Production, Cost of (U.S.A.) ... 65
Production in Japan... 591
Production of Cloth, England, 1930 and 1924 263
Production of Cotton Fabrics in U.S.S.R. 593
Production of Rayon, Estimated 133, 606
Production of Yarn, England, 1930 and 1924 257
Purchase of Egyptian Cotton by Italy 224
Production per Spindle and Loom (France) 258
Propaganda, Egyptian Cotton ... 212
Prospects of a Revival in the Consumption of Cotton 27

Quantity and Counts Spun in India ... [illegible]

Queensland: Cotton Growing ... 359

Rayon, Estimated Production of 133, 606
Reduction in Cotton Yield, Report on (U.S.A.) 502
Reduction of Acreage (U.S.A.) 71, 386
Reduction of Acreage Schemes (U.S.A.) 65
Redundancy in the Cotton Industry 27
Remedies for the Crisis in the Cotton Industry (R. Brasseur) ... 310
Renewal of Agreement with Regard to Standard of Moisture (Egypt) 529
Repercussions of Currency Fluctuations and Trade Restrictions ... 326
Repercussions of the Crisis in Various Countries 23
Report on Reduction in Cotton Yield from Stated Causes (U.S.A.) ... [illegible]
Restriction of Acreage (Egypt) ... [illegible]
Restrictions on Cotton Imports (Greece) 591
Restrictions:
  Trade and Currency 303
  Dr. E. Zucker 320
  R. A. de la Beaumelle 326
  Dr. G. Mylius 332
Retail Prices, Index numbers of (U.S.A.) 517
Reviews: 146-148, 294-296, 456-458, 607-608
  Bleaching, Dyeing and Printing for the Manchester Trade ... 607
  Bombay Millowners' Association Yearbook 148, 607
  Comtelburo Handbook 148
  Cotton Trade Policy for Spinners 608
  Cotton Year Book... 456
  Davison's Textile Blue Book ... 147
  Deutsche Textil Industrie ... 294
  Economic Conditions in Brazil ... 457
  Economic Conditions in Egypt ... 295
  Empire Cotton Growing Review, 147, 284, 457, 607
  Future Trading Upon Organised Commodity Markets ... 456
  Handbook of Cotton Trade Statistics 607
  Indian Cotton Facts 295
  Lancashire and the Far East ... 146
  Lancashire Textile Directory ... 458
  Reports Received from Experimental Stations 457
  Shirley Institute Memoirs ... 457
  Skinner's Cotton Trade Directory 146
  Technical Terms in the Cotton Trade 295
  Yearbook of the National Association of Cotton Manufacturers ... 147
  Yearbook of the New York Cotton Exchange 294
  Yorkshire Textile Directory ... 147
Revised Acreage and Yield Returns (U.S.A.) 490
Revival in the Consumption of Cotton, Prospects of a ... 27
Root Rot in Texas 71
Roumania: Production and Imports of Cotton Goods 271
Rules of Arbitration 308

PAGE
Runciman Speech by the Rt Hon Walter M P 334
Russia
  Artificial Cotton in 137
  Cotton Growing 48 180 351 361 405
  Cotton Industry in 431
  Cultivation of Egyptian Cotton in 53
  Exports of Cotton 495
  Imports of Cotton 495 503
  Production of Cotton Fabrics in 503
  State of Trade Reports 37 318
  Yield per Acre of Cotton 137

Sakel Acreage Restriction 79 211
Sales of Egyptian Government Cotton 212
Sales Policy Egyptian Government 5 7
Salvador Cotton 55
St Vincent Cotton Growing 495
Scheme for Regulation of Production Egyptian Section of Lancashire Cotton Industry 55
Sea Island Cotton 377
Second hand Textile Machinery in Germany, Export Duty on 137
Shipments of Egyptian Cotton 86 396
Short Time Table 55 4
Situation of Egyptian Market (A S Pearse) 8
Six Loom System
  Holland 306
  Switzerland 165
Sledding Cotton (U S A) 207
South Africa Cotton Growing 360 497
South America Spindles 2
Southern Rhodesia Cotton Growing 41
Spain
  Cotton Growing 496
  State of Trade Reports 37 345 480
Speech by the Rt Hon Walter Runciman M P 534
Spindleage Questionnaire 358
Spindles
  World's 55 104
  Austria 170
  China 579 581
  France 3
  India 2
  Japan 22
  South America 22
  U S A 582
Spinning Tests of 1931 Delta Crop (U S A) 506
Spinning Value of New Egyptian Cottons (Dr Balls) 388
Stamp Tax on Sales of Cotton Futures (U S A) 516
Standard Tare in U S A 206
Staple Lengths of Foreign Cottons Consumed in U S A 585
Staples (U S A) 62
State Assistance for French Cotton Industry 269
State of Trade Reports 29-40, 154 167 337-349 470 482
  Austria 29 337 470
  Belgium 5 31 154 340 472
  Brazil 32 175, 351
  China 155 348
  Czecho Slovakia 5, 34 155 340 471
  England 6 156 307 341, 475

PAGE
State of Trade Reports—continued
  Denmark 5 306
  France 6 33 158 306 342 475
  Finland 157
  Germany 6 34 159 307 343 478
  Holland 6 30 160 306 344 478
  Hungary 36 161 478
  Italy 6 37 162 307 345
  Japan 162 480
  Portugal 348
  Russia 37 318
  Spain 37 345 480
  Sweden 6 164 346 481
  Switzerland 6 39 165 307 347 481
  U S A 40 166 349 482
Stocks of Cotton in Alexandria 80 394
Stocks of Egyptian Government Cotton 212
Stocks of Sundries Cotton 106
Study of Cork Rolls for Cotton Spinning 113 55
Substitution of Jute Covering by Cotton Material 534
Sudan Cotton Growing 180 305 496
Sundries Cotton
  Consumed 106
  Stocks of 106
Sukkur Barrage 36
Sweden State of Trade Reports 6 164 346 481
Switzerland
  Exports 39 165 481
  Imports 39 481
  State of Trade Reports 6 39 165 307 347 481
  Wages Reductions 165
Syria Cotton Growing 497

Tanganyika Cotton Growing 49
Tare Standard (U S A) 206
Tariffs on Cotton Goods (Holland) 161
Tariffs on Japanese Cotton Goods in India 103
Technical Section 109 118 240 251 416 428 568 577
Ten Years of Cotton Textiles (U S A) 581
Test of Dr Balls Capacitance Hygrometer 538
Texas Acreage in 1932 379
  Acreage Reduction Measures in 71
Texas Farmers Sledding Cotton 207
Textile Combine in Barnaul (East Siberia) 433
Textile Industry in U S S R 431
Textile Manufacture in Manchuria 255
Textile Printing Gum for 117
Third Official Cotton Forecast (India) 225
Trade Restrictions Resolution on 7
Trade Restrictions and Currency Systems 303 320
  Dr E Zucker 320
  R A de la Beaumelle 326
  Dr G Mylius 332
  Repercussions of 326
Trade Union Action 21
Transacting Cotton Business on Net Weight Basis (U S A) 205
Turkey Cotton Growing 181
Uganda
  Cotton Growing 49 181 360
  Export Duty on Cotton 182

PAGE
Ukraine, Egyptian Cotton in [illegible]
Universal Winding Company [illegible]
U.S.A.:
  Acreage and Growth [illegible]
  Acreage Prospects 381
  Acreage Reduction [illegible], 381
  Acreage Reduction Measures in Texas [illegible]
  Acreage Reduction Scheme [illegible]
  Acreage Report [illegible]
  American Cotton Co-operative Association [illegible]
  Artificial Cotton [illegible]
  Boll Weevil [illegible]
  Consumption and Stocks of Foreign Cotton 131
  Consumption of Egyptian Cotton in [illegible]
  Consumption of Fibres 113
  Control of Cotton Acreage 109
  Cost of Production [illegible]
  Cotton by Road, Rail and River [illegible]
  Cotton Co-operative Receipts [illegible]
  Cotton Crop [illegible]
  Cotton for Airships [illegible]
  Cotton Gift Bill, President Signs [illegible]
  Cotton Ginning Investigation [illegible]
  Cotton Hat [illegible]
  Cotton Production Report [illegible]
  Cotton Propaganda in [illegible]
  Crop Reports 71, [illegible], [illegible], [illegible]
  Dates of Grade and Staple Reports 368
  Drying of Damp Cotton [illegible]
  Egyptian Cotton Consumed in [illegible]
  Equalisation Fee and Debenture Plan [illegible]
  Estimated Consumption [illegible]
  Experimental Ginning Station [illegible]
  Exports 118
  Farm Board Cotton [illegible]
  Farm Board's Policy [illegible]
  Federal Farm Board's Holdings [illegible]
  Federal Farm Board Authorises Sale of Holdings 501
  Final Government Cotton Report 190
  Future Plans of A.C.C.A. 37
  Ginning Investigations 500
  Ginning Reports 51, 191, 365
  Grade and Staple Consumption Report [illegible]
  Grade and Staple Reports 141, 192, 367, 500
  Grades 63
  How Long? 55
  Imports 451
  Index Numbers of Retail Prices 517
  Moisture in American Cotton 303, 207, 442
  National Cotton Week 441
  Net Weight Bill for Cotton 371
  Net Weight Contract for Raw Cotton 205, 368
  New Uses for Cotton Cloth 144
  Preliminary Final Cotton Crop Report 189
  President Signs Cotton Gift Bill 502
  Probable Weevil Activity 378
  Report on Reduction in Cotton Yield from Stated Causes 502

PAGE
U.S.A.—*continued*
  Revised Acreage and Yield Returns [illegible]
  Root Rot in Texas [illegible]
  Sea Island Cotton [illegible]
  Spindles [illegible]
  Spinning Tests [illegible]
  Stamp Tax on Sales of Cotton Futures [illegible]
  Standard Time [illegible]
  Staple Length of Foreign Cotton Consumed in [illegible]
  Staple [illegible]
  State of Trade Report [illegible], 18
  Statistics of Production of Cloth [illegible]
  Ten Years of Cotton Textiles [illegible]
  Texas Acreage [illegible]
  Texas Farmers Sledding Cotton [illegible]
  Transacting Cotton Business on Net Weight Basis [illegible]
  Visit to Cotton Belt, 1931 [illegible]
  Volunteer Crop Ruined 381
  Weights of Cotton Bales 378
  Weevil Situation [illegible]
  Yield per Acre in 1931 [illegible]
U.S.S.R., see under Russia

Varieties of Egyptian Cotton, Elimination of [illegible]
Visit to U.S. Cotton Belt, 1931 [illegible]
Volunteer Crop Ruined (U.S.A.) 381

Waddington, Arthur [illegible]
Wage Reductions:
  Belgium 310, [illegible]
  France [illegible], 300, [illegible]
  Germany 311
  Holland 311
  Switzerland [illegible]
Wall Coverings, Cotton [illegible]
Weevil, Probable Activity of [illegible]
Weevil Situation (U.S.A.) [illegible]
Weft Replenishing Device, Northrop [illegible]
Weight of Cotton Bales (U.S.A.) 378
Winding Machinery [illegible]
Woollen Industry, Customs Unions in [illegible]
World's Cotton Acreage and Production 184, 187
World's Cotton Consumption [illegible]
World's Cotton Crops, Classification of [illegible]
World's Cotton Mill Consumption 98, 100, [illegible]
World's Cotton Mill Stocks 98, 102, [illegible]
World's Cotton Position 135
World's Production of Motor Car Tyres 551
World Rayon Production 133, 606
World's Spindles 19, 104

Yarn and Piece Goods in India, Production of 565
Yarn Exports of Japan 161
Yarn Production Curtailment in Japan 437
Yarn Production, England, 1930 and 1924 263
Yarn Strength, How Twist Affects 211
Yield per Acre, Average in Various Countries 62, 137

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ALPHABETICAL INDEX TO ADVERTISERS

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PAGE

Alexandria Commercial Co. .. 90
American Cotton Growers' Exchange .. .. .. *front cover*
Anderson, Clayton & Co. .. 62

Brooks & Doxey (1920), Ltd. .. 162

"Commerce & Finance" .. 119
Cook, Thos., & Son, Ltd. .. 130
Courtaulds Ltd., *outside back cover*
Cotton Export Co. "Missr" Ltd. *inside back cover*

Davison's Textile Blue Book 105
Dixon, R. L., & Brother .. 72
Dobson & Barlow, Ltd. .. 159
Dodd, S., & Sons 156

Eggerichs, Franz Emil.. .. 130
Egyptian Produce Trading Co. 89

François, L. F., & Cie. 72

Grace & Co., W. R. 71

Hetherington, John, & Sons .. 161
Howard & Bullough, Ltd. .. 158

Lancaster & Tonge 130
Lees, Asa, & Co., Ltd. 160
Lord Bros., Ltd... 162

Maarad Cotton Company .. 85
Marsden, C. W., Ltd. 120
Meynell, Henry, & Co... .. 154

PAGE

Munds, Winslow & Potter .. 76

New York Cotton Exchange .. 71

Platt Bros. & Co., Ltd. .. 157

Reinhart & Co. 86
Reynolds & Gibson 72
Rieter & Co., Joh. Jacob .. 119
Royal (Egyptian) Agricultural Society 85

Scholten's, W. A., Chemical Works, Ltd. 120
Skinner, Thos., & Co. 40
Société Alsacienne de Constructions Mecaniques .. 120
Standard Marine Insurance Co. 81

Taylor, Lang & Co., Ltd. .. 48
Textile & Engineering Press Bureau, Ltd. 148
Textile Development Co. .. 123
"Textile, La," Société Co-operative 48
Textile Paper Tube Co., Ltd. 40
Tweedales & Smalley (1920), Ltd. 155

Universal Winding Co. .. 116

Weld & Co. 90
Wilson Bros. Bobbin Co., Ltd. 153
Worrall, John, Ltd. 129

CONTENTS

VOL. XI. No. 41.

PAGE

MINUTES OF MEETING OF INTERNATIONAL COTTON COMMITTEE 1–16
Presidency of the International Cotton Federation, 2; International Wool Textile Organization, 3; Limitation of Credits, 3; International Textile Congress, 3; Trade Restrictions, 4; Consideration of the Recommendations of the American Cotton Moisture Sub-Committee, 4; Plans for Dealing with Redundant Cotton Machinery in the Affiliated Countries, 6; Joint Egyptian Cotton Committee, 7; Extraction of Dust from Cotton in Ginning Factories, 8; Prague Cotton Congress, 1933, 8; State of Trade Reports: England, 9; Switzerland, 9; Czecho-Slovakia, 9; Holland, 9; Denmark, 9; Belgium, 10; Italy, 10; Spain, 10; Austria, 11; France, 11; Unemployment Benefit, 11; Forty-Hour Week, 13; Statutes Revision Sub-Committee, 13; Date and Place of Next Meeting, 13; Vote of Thanks, 13; Resolutions Adopted by Sub-Committee for Moisture in American Cotton, 14.

THE DEPRESSION IN THE EUROPEAN COTTON INDUSTRY, by Monsieur Robert Brasseur 16–23

NOTE ON THE PROPOSAL FOR AN INTERNATIONAL COTTON AGREEMENT by Monsieur Robert Brasseur 24–27

STATE OF TRADE REPORTS 28–39
Austria, 28; Belgium, 30; China, 31; France, 31; Germany, 33; Holland, 34; Hungary, 35; Japan, 35; Sweden, 35; Switzerland, 36; U.S.A., 37; U.S.S.R., 39.

COTTON GROWING 40–61
Algeria, 41; Brazil, 41; Bulgaria, 43; China, 43; Colombia, 45; Cyprus, 45; Ecuador, 46; Portuguese Africa, 46; French Indo-China, 46; French Equatorial Africa, 46; Greece, 46; Mexico, 46; Queensland, 47; St. Vincent, Windward Islands, 49; Spain, 49; Sudan, 49; Syria and Lebanon, 50; Tanganyika, 50; Turkey, 50; Uganda, 50; Union of South Africa, 51; U.S.S.R., 51; World Production, 52; New Cotton Organizations Formed in China, 53; The Cotton Situation in Soviet Russia, 55.

AMERICAN COTTON 62–81
Official Government Report, October 1st, 1932, 63; Cotton Grade and Staple Report, 64; U.S. Department of Agriculture, 65; Standards for Extra White Cotton, 66; Reconstruction Finance Corporation, 67; "Red Cross Cotton," 68; The Mechanical Harvesting of Cotton, 70; Cotton Loan Terms for Farmers, 73; Chinese Consumption of U.S. Cotton, 73; Carry-Over Grade and Staple Length Report, 74; Crop Reports, 75; Market Reports, 79; U.S. November Crop Report, 144.

EGYPTIAN COTTON 82–94
First Government Crop Estimate, 83; Renewal of the Cotton Tax, 83; German Fertilizer for Egyptian Cotton, 84; Egyptian Cotton Acreage, 84; Handling Charges in Egypt, 87; Stock of Cotton in Alexandria, 88; Varieties of Cotton Planted, 88; Market Report, 91; Exports of Cotton from Egypt, 92; Weekly Bulletin of the Bourse de Minet-el-Bassal, 94; Government Sales, 94; Egyptian Cotton Consumed in U.S.A., 94.

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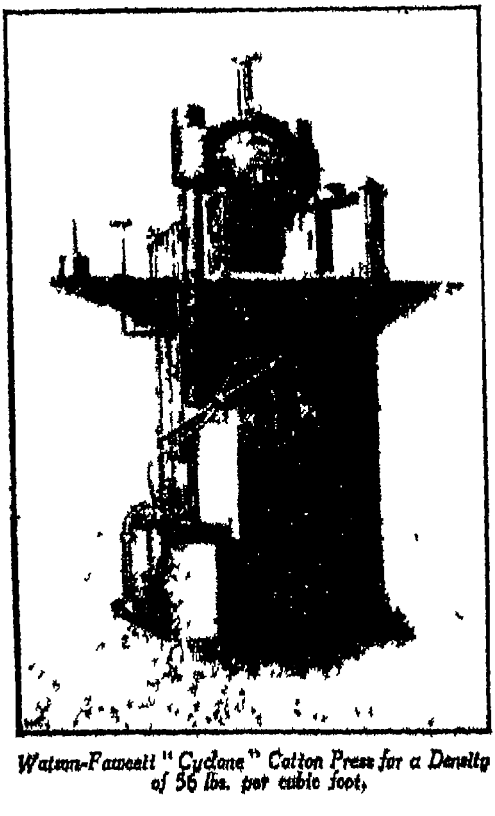

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CONTENTS—*Continued.*

PAGE

EAST INDIAN COTTON 95-105
First Cotton Forecast, 95, Improvement of Indian Cotton, 96; The Boll Worm in India, 99, Market Reports, 102, Cotton Exports from India, 103, Distribution of Shipments to Europe, 104.

INTERNATIONAL COTTON STATISTICS 106-115

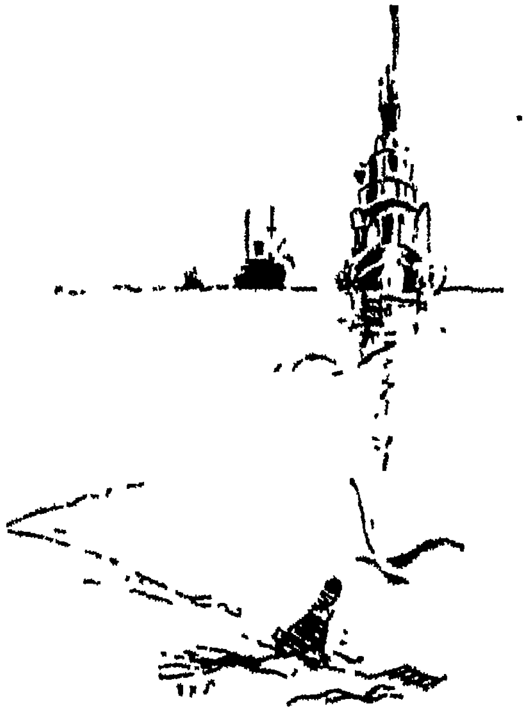
TECHNICAL SECTION 116-124
The Anti-Crease Process, 117; Textile Research in U S S R, 122; Taker-in Speeds and their Effect upon Yarn, 122.

COTTON MILL NOTES 125-135
Italian Cotton Wages, 125, Effect of Noise on Weavers, 126, Portugal, 128; Cotton Mill Wages in U.S.A, 131; Night Work in Cotton Mills, 132, American Cotton in China, 132; Cotton Wages in Shanghai, 133, Czecho-Slovak Cartel, 135; Turkey, 135.

MISCELLANEOUS 136-144
New Uses for Cotton, 136, Cotton Roadways Justified, 137; British Textile Exhibition, 138; Lancashire Wage Settlements (Spinning and Weaving), 139; U S. Crop Report, November, 144.

COTTON TRADE STATISTICS 145-149
Great Britain, 145; Japan, 145; U S A Exports of Raw Cotton and Cotton Goods, 146, U S A. Total Cotton Consumption, 1932, 148; World Supply and Distribution of All Kinds of Cotton, 148; World Production of All Kinds of Cotton, 149; Estimated Production of Rayon Yarn, 149

REVIEWS ON CURRENT COTTON LITERATURE 150-152



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EXTRACTS from MINUTES of the MEETING of the INTERNATIONAL COTTON COMMITTEE, held at the Grand and Palace Hotel, Lugano, Switzerland, on Friday, 14th October, 1932, at 10 a.m.

There were present: Mr. Paul Schlumberger, Vice-President (in the chair), Mr. John Syz (Switzerland), Mr. Frederick Holroyd, J.P. (England), Count Jean de Hemptinne (Belgium), Mr. Arthur Kuffler (Austria), Mr. R. Brasseur (Belgium), Dr. Ernest Zucker (Czecho-Slovakia), Mr. Holger Sebbelov, Mr. H. Windfeld-Hansen (Denmark), Mr. Roger Seyrig, Mr. R. A. de la Beaumelle (France), Dr. Hendrik van Delden, Dr. W. Bohm (Germany), Mr. Joan Gelderman (Holland), Dr. G. Mylius, Dr. S.A. Soldini (Italy), Mr. Santiago Trias (Spain), Mr. Caspar Jenny (Switzerland), Mr. Arno S. Pearse (Expert Adviser), Mr. N. S. Pearse (General Secretary), Mr. John Pogson, junr. (Assistant Secretary), and Dr. J. Muzik and Dr. D. Zachystal (Czecho-Slovakian Secretaries).

Apologies for non-attendance were received from: Mr. William Howarth, J.P., Mr. John H. Grey, J.P., Mr. Fred Mills, J.P., Mr. T. Ashurst, Mr. John Pogson (England), Mr. Otto Anninger (Austria), Baron K. E. Palmen, Mr. M. Lavonius (Finland), Geh. Komm. Otto Lindenmeyer, Mr. Edmund Dilthey (Germany), Mr. Robert von Szurday (Hungary), Sir Ness Wadia, Sir Thomas Smith (India), Mr. K. Shimada (Japan), Mr. Eduardo

Blikstad (Norway), Mr. H. P. Taveira (Portugal), and Mr. Axel Bergengren (Sweden).

Mr. SCHLUMBERGER, in opening the meeting, expressed his appreciation of the opportunity to hold it in such delightful surroundings as Lugano, and thanked the Swiss Association for the satisfactory arrangements made and for the hospitality extended to the representatives.

Mr. JOHN SYZ replied on behalf of the Swiss Association, and cordially welcomed the delegates.

PRESIDENCY OF THE INTERNATIONAL COTTON FEDERATION.

The CHAIRMAN referred in sympathetic terms to the President's illness, and stated that Mr. William Howarth had tendered his resignation verbally to the General Secretary.

Mr. JOHN SYZ associated himself with the sympathetic expression of Mr. Schlumberger, and stated that no one upon the Committee desired Mr. Howarth to vacate his office as President. The Committee fully endorsed this desire, and thereupon he moved the following resolution, which was carried unanimously:—

"This Committee learns with great satisfaction that the health of the esteemed President, Mr. William Howarth, has much improved after his recent serious illness, and expresses the sincere hope of his speedy recovery.

"The Committee is convinced that in a short time Mr. William Howarth, in consequence of his iron will and energy, will again be able to fulfil the activities of the office as President of the International Federation.

"In order to facilitate his work, it is hereby resolved:—

"To nominate two Vice-Presidents, one of them residing in England. The English member Associations to be invited to submit a name as candidate for this office.

"This resolution to take effect at once, and to be submitted to the next Congress for ratification and for the purpose of a corresponding change of the rules.

"In the meantime, the Committee sincerely hopes that Mr. Howarth will continue to hold the office of President."

Mr. F. HOLROYD (England) moved, and it was unanimously agreed, that the following telegram should be sent to Mr. Howarth:—

"At the opening of the meeting of the International Committee at Lugano to-day the Committee heard with great pleasure that its most esteemed President is improving in health, and herewith sends him its heartiest greetings and a sincere desire for his speedy and complete recovery."

The Committee also passed a vote of thanks to Mr. Holroyd for his services to the International Federation during Mr. Howarth's enforced absence.

The CHAIRMAN pointed out that, in view of the first resolution, it would be necessary to alter the Statutes relating to the election of President and Vice-President. Mr. JOHN SYZ

(Switzerland) proposed that the rule should be amended as follows:

"The Committee elects its officers from amongst its own members.

"The offices of President and two Vice-Presidents are to be held alternatively by different persons of the International Committee for a period of two years, but in view of England's position in the world's cotton industry, the President will be elected every second term from amongst the English representatives of the International Committee. One of the Vice-Presidents is to be chosen from and by the English representatives on the Committee."

This suggestion was carried.

INTERNATIONAL WOOL TEXTILE ORGANIZATION.

Mr. F. HOLROYD (England) gave a brief account of the proceedings of the International Wool Conference held at Amsterdam, on October 4 and 5, at which both himself and the General Secretary had been present. He expressed the opinion that it would be mutually advantageous to both the International Wool Textile Organization and the International Cotton Federation if they would co-operate one with the other. It was thereupon decided to invite the International Wool Textile Organization to send one or two delegates to the next International Cotton Congress, to be held in Prague in 1933.

LIMITATION OF CREDITS.

A letter had been received on this subject from the International Wool Textile Organization and circulated to the International Cotton Committee. A general discussion took place, and finally it was decided that the first step towards co-ordination should be the collection of information upon the customs relating to the sale of cotton cloth in the various affiliated countries. The following resolution was finally adopted: —

"That the Head Office of the International Cotton Federation circularize the various affiliated Associations with a view to obtaining information upon the various existing usages in the sale of raw cotton; cotton yarn, grey and bleached; cotton cloth, grey bleached and finished; for the home market and for export. This information to be finally laid before the Committee and published in the INTERNATIONAL COTTON BULLETIN."

INTERNATIONAL TEXTILE CONGRESS.

After some discussion, the following resolution, proposed by Mr. KUFFLER (Austria), was adopted unanimously: —

"That this Committee, while not convinced that there are at present enough questions of common interest to the various sections of the world's textile trade to warrant the convening of an International Textile Congress, expresses its willingness to appoint delegates to any joint international committee, should special questions of common interest arise."

TRADE RESTRICTIONS.

Mr. R. **BRASSEUR** (Belgium) introduced the subject by reading his paper entitled "Note on the Proposal of an International Textile Agreement." This paper had been circulated to the Committee.

Mr. Brasseur read and elaborated upon his statement, and said that other countries besides Holland, Belgium and Luxembourg were eligible to enter into the Ouchy agreement.

A prolongued discussion ensued and, finally, Mr. **HOLROYD** submitted the following resolution, which was adopted unanimously:—

> "Resolved, that Mr. R. Brasseur (Chairman), Mr. Joan Gelderman, Mr. A. Kuffler, Dr. G. Mylius, Dr. W. Bohm, Mr. J. H. Grey, Mr. R. A. de la Beaumelle, Mr. H. Windfeld-Hansen, and Dr. Ernest Zucker be appointed a sub-Committee with a view to bring other countries within a Cotton Customs House Tariff Agreement, to study the effects of tariffs, currency restrictions, quotas, etc., and their incidence upon industry and trade, and that the Sub-Committee be empowered to obtain expert advice."

CONSIDERATION OF THE RECOMMENDATIONS OF THE AMERICAN COTTON MOISTURE SUB-COMMITTEE.

Dr. G. **MYLIUS** (Italy) submitted figures showing that Texas cotton was dryer than cotton from Eastern ports, but he considered tests ought to be taken. He asked permission for the introduction of Mr. H. Tobler, a prominent member of the Italian Association, and Prof. Camilio Levi, the manager of the Milan Testing House.

Mr. Tobler had invented an apparatus for taking a cotton sample right from the centre of the bale without necessitating the removal of the bands. The sample was so far only used for testing for humidity, but could also be used for estimating grades. Prof. Levi supported Mr. Tobler's statements, and stated that no heat was generated in the extraction of the sample, thus eliminating loss of moisture. The great advantage, however, was the speed in sampling and the possibility of taking the sample without breaking the bands. Waste was small, and the results of moisture tests were the same as those taken in the usual manner. The weight of a sample taken was 300 grammes instead of 500 grammes, but in reply to Mr. Brasseur, Prof. Levi stated that it made no difference to the actual result of the test that only 300 grammes were sampled. He stressed the point that the sample was not touched by hand.

The Committee then adjourned for luncheon.

Upon the resumption of the meeting, the General Secretary read the following recommendations adopted at the Ghent meeting of the American Moisture Sub-Committee, on August 15, 1932. (See Appendix.)

After discussion, the following resolutions were eventually adopted:—

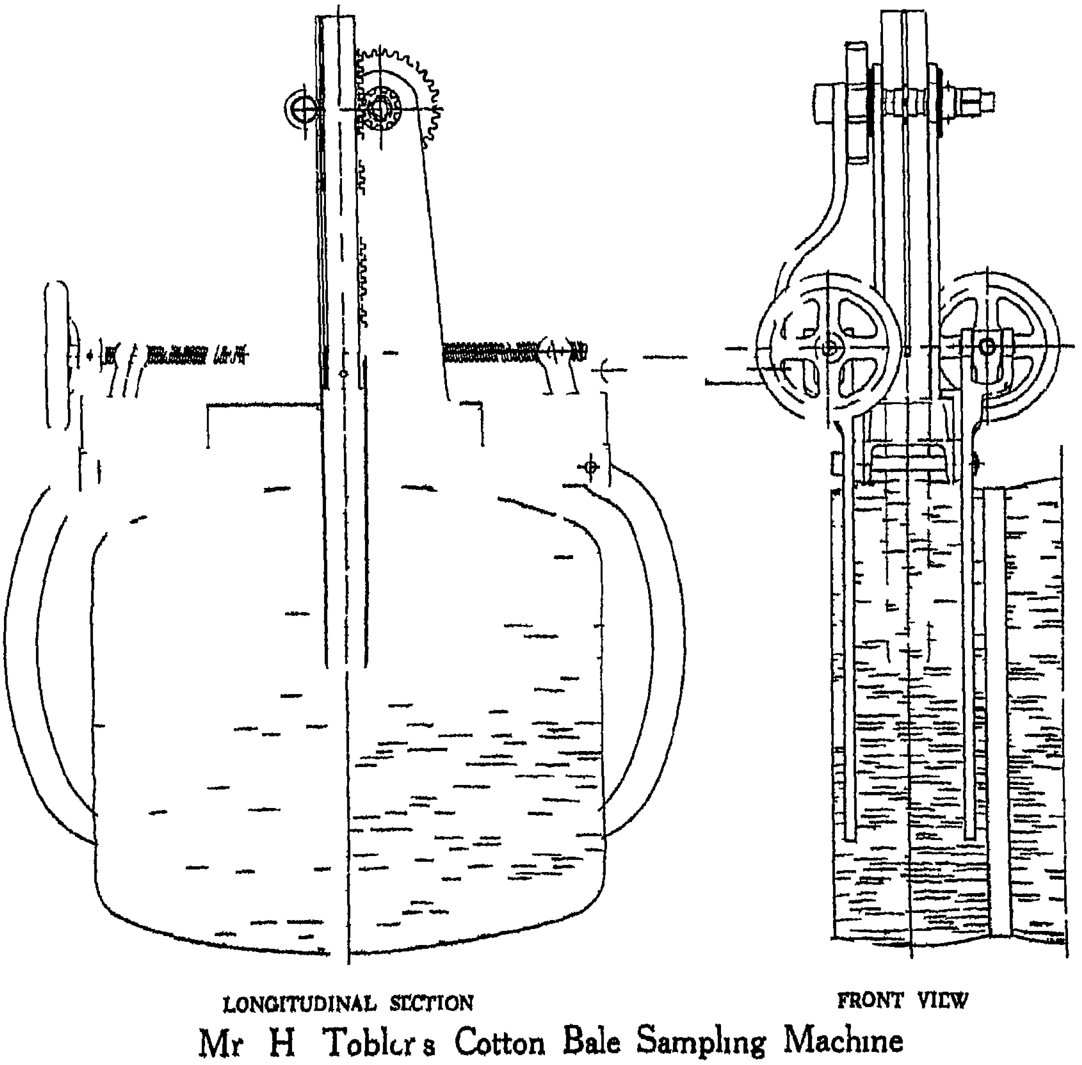
"That this Committee endorses the above recommendations of the Moisture Sub Committee meeting held at Ghent on August 15 1925 regarding a uniform method of testing American cotton for moisture content

It was also agreed to recommend the members of all affiliated Associations to carry out moisture tests on the basis of the above uniform methods and submit copies of their results to the Head Office through their national Association for tabulation

As regards a standard of moisture content in American c i f cotton the following resolution was finally agreed upon —

> Eight and a half per cent to be the standard regain for c i f American cotton with a tolerance of 0 5 per cent down If the cotton contains less than 8 per cent of moisture the spinner shall pay the difference to the seller up to 8 per cent If the moisture content be more than 8 5 per cent the seller shall pay for the excess above 8 5 per cent

A vote of thanks was passed expressing the high appreciation of the Committee for the great amount of work accomplished by the Sub Committee for Moisture in American Cotton and the General Secretary was instructed to forward a letter expressing the thanks of the Committee to the members of the Sub Committee



LONGITUDINAL SECTION FRONT VIEW

Mr H Toblers Cotton Bale Sampling Machine

PLANS FOR DEALING WITH REDUNDANT COTTON MACHINERY IN THE AFFILIATED COUNTRIES

Mr R. Brasseur (Belgium) introduced the question by reading his paper on The Depression in the Cotton Industry.

Mr Caspar Jenny (Switzerland) was of the opinion that the scrapping of obsolete machinery was a matter to be dealt with nationally and not internationally as conditions differed considerably in each country. He then proceeded to explain the scheme in force in his own country. He stated that the sum of 18 000 Swiss francs per month was intended to be collected from those manufacturers supporting the scheme, the rate of levy being one franc per loom per month still running. When a purchase of old machinery was made the seller would have to sign an agreement to the effect that no cotton or artificial silk manufacturing would be carried on in the mill for a period of at least 30 years. The speaker emphasized the necessity for the abolition of the third shift in the cotton industry and for the limitation of the single shift to eight hours. He submitted that the subject of the elimination of the third shift should be discussed at the Prague Cotton Congress. The speaker also drew attention to the detrimental effects to European industry generally by the payment of unemployment benefit. The cost of production must be still further reduced in order to allow the agricultural worker to buy cotton goods. The suggestion of the International Labour Office to work 40 hours a week would raise substantially our cost of production still further.

Mr R. Brasseur (Belgium) further pointed out that if a 40 hour week were adopted still more double shift working would follow, and instanced the fact that double shifts had been made possible by the adoption of the 48 hour week after the war instead of the 56 hour week previously in existence.

Dr G. Mylius (Italy) stated that a scheme for an agreement between Italian cotton employers in the spinning section was put forward last year and closely studied by those concerned, in order to arrive at a severely regulated reduction of output. It was intended to reduce proportionally the hours of labour every time spinners production statistics revealed the necessity for this measure. Provision was also made in the scheme for the stoppage of sections of the machinery in individual mills.

Upon the scheme being submitted to the trade, however, sufficient favourable replies were not received to justify its being put into operation.

Further measures were explored towards the end of 1931 and last spring the spinning section of the Italian Association formulated a scheme for a cartel to include all branches of spinning mills in Italy whether limited to spinning or connected with weaving, sewing, hosiery or knitting.

According to this latter scheme spinners set up a special committee with full powers to establish the maximum number of spindles to be run, and to fix the degree and the period of time for a stoppage of machinery.

These regulations will only come into operation after their approval by the Superior Confederation of Industries, thus guaranteeing that the interests of the individual spinner and of the whole spinning trade are alike duly protected

For the pursuance of the above mentioned aims a levy consisting of a fixed sum per spindle will have to be raised in order to create a fund sufficient to compensate for the stoppage of either a part or the whole of the working plant of the firms, due consideration being given to both age and working capacity of the plant

The project of the Union was approved by the General Board of the Association, and a ballot of spinners is now being taken on the question, but it is still uncertain whether or not the necessary majority will be obtained

In reply to a question, the speaker said that before Government powers are given for the acquisition of redundant machinery, 70 per cent of the industry must be in favour of the scheme

Mr SANTIAGO FRIAS (Spain) presented to the Committee the resume of the plan that the jute industry of Spain had elaborated, and which was generally applied to the cotton industry It consisted of the payment of a tax of 10 or 15 centimos per kilo of all raw material imported The amount goes to a common fund to be divided between the members in proportion to the number of spindles, 150 pesetas per stopped spindle down to 75 pesetas for those which are working

Each spinner pays this tax rather than sell at a loss, since he can rely on a safe profit if his goods cannot be absorbed by the market alone since it suits him to stop all or part of his machinery In this way the reduction of the amount of production is automatic, in accordance with prices and these in turn according to production

There is at present existing in Spain the Industrial Cotton Committee founded in order to protect exports, which collects from the spinners 10 centimos per kilo of cotton which they import This collection is applied as bounties on exportation So far, the existence of the Committee has been of benefit in that, while not increasing Spain's production excessively, it has been able to maintain production within reasonable limits

JOINT EGYPTIAN COTTON COMMITTEE

The General Secretary read the resolutions adopted by the meeting of the Joint Egyptian Cotton Committee held at Windermere on July 11 and 12, 1932, and, after discussion, the following resolution was unanimously adopted —

> "It was unanimously resolved to approve the recommendations arrived at by the Joint Egyptian Cotton Committee at Windermere, on uly 11 and 12, 1932, and further decided to callect information upon the various types of Egyptian cotton consumed, and the quantity of Egyptian and other kinds of cotton consumed by the tyre industry
>
> "It was furthermore agreed to collect statistics upon the consumption of artificial silk during the course of the next International Loom Census in December, 1933"

The meeting then adjourned at 6 p m until 9 a m the following morning

EXTRACTS from MINUTES of the ADJOURNED MEETING of the INTERNATIONAL COTTON COMMITTEE, held at the Grand and Palace Hotel, Lugano, Switzerland, on Saturday, 15th October, 1932, at 9-0 a.m.

EXTRACTION OF DUST FROM COTTON IN GINNING FACTORIES.

On this question being raised, it was the unanimous desire of the Committee that representations be made to the proper authorities urging the elimination of dust, etc., from cotton at the ginneries.

DISCUSSION OF PRELIMINARY ARRANGEMENTS OF THE INTERNATIONAL COTTON CONGRESS TO BE HELD IN PRAGUE 1933.

It was decided that the Trade Restrictions Sub-Committee, along with the Officials, should be responsible for making the preliminary arrangements in connection with the Prague International Cotton Congress. For the purpose of facilitating co-operation between this Sub-Committee and the Czecho-Slovakian Associations, the Secretaries of the latter bodies were authorized to be present, should they so desire.

It was decided to hold the Cotton Congress in Whit week, 1933. The preliminary programme of meetings and Congress proceedings to be as follows:—

Tuesday, June 6, 1933. Meeting of the Joint Egyptian Cotton Committee.

Wednesday, June 7, 1933. Meetings of the International Cotton Committee and Congress Sub-Committee.

Congress Proceedings.

Thursday Morning, June 8, 1933. Inaugural Reception.

Thursday Afternoon, June 8, 1933. First Session of Congress.

Friday, June 9, 1933. Second Session of Congress.

Saturday Morning June 10, 1933. Third Session of Congress (Resolutions).

It was also decided to hold a separate Sectional Meeting for the Egyptian section.

The following subjects are suggested for discussion:-

The Effects of Futures Trading upon the Cotton and the Cotton Yarn Market.

The Protection of Spinners from Financial Losses Due to Failure of Cotton Exporters.

The Development of the More Looms per Weaver System.

The Effect of Unemployment Benefit upon European Industry.

STATE OF TRADE REPORTS

(Other State of Trade Reports will be found on p. 28.)

ENGLAND

A large number of mills were still stopped in the spinning section and many more were working short time. A strike in the weaving section had only recently terminated. The general position showed practically no change compared with the previous six months. Margins were unremunerative.

Since the above report was presented a strike has arisen in the spinning section of the Lancashire cotton industry, owing to the representative meeting of the Operative Spinners Amalgamation having declined to ratify the agreement reached at the Midland Hotel in Manchester on October 22. A ballot is now being taken of the members both the cardroom and spinners amalgamation to ascertain whether they are prepared to accept or reject the settlement arrived at between their officials and representatives of the English Spinners Federation.

SWITZERLAND

During the last few weeks the inland market had improved to a slight extent but the export trade had further deteriorated.

CZECHO SLOVAKIA

Dr. Zucker informed the Committee of the formation of a cartel in the coarse spinning section in Czecho Slovakia. This cartel controlled the prices and production of coarse cotton yarns, but did not control the selling organization. The operation did not raise spinners' margins by more than 2 per cent. on the aggregate. Approximately 95 per cent. of the coarse spinners were members of this cartel.

The spinning section in Czecho Slovakia was at present working about 60 per cent. of full capacity which was less than July and August. Prospects for the future were, however, not so bright, and more short time is being contemplated.

In the weaving section prices were unsatisfactory; the export business had been seriously affected by the import prohibitions in the Balkan States. Fully 33 per cent. of the looms were stopped. Double shifts were being worked by some few firms.

HOLLAND

Conditions in this country for the export trade remained poor. Most mills were on short time, especially those working for export. Some of these mills working for the Java trade have many thousand looms totally stopped. The demand for the home trade market is better than that for export. Price remained poor due to excessive competition from firms formerly engaged in the manufacture for export.

DENMARK

This country is still suffering from the effects of the crisis, and though the prices of agricultural products have risen a little during the last few months, they are as yet far from profitable. Further, the export trade is suffering from the effects of the quotas which have been introduced in many countries, recently even some of these quotas have been further reduced

The consequent effect upon Danish buying power is very great Shipping is also suffering heavily a great percentage of the tonnage being laid up Denmark has been compelled (through the quotas) to limit imports especially of luxury goods from countries which have cut down Danish exports to them

The cotton mills are running to about 80 per cent of normal capacity at the present time, this improvement being due to the limitation of imports

No changes have taken place in wages

BELGIUM

Since August 8 the general demand for yarn and cloth has increased to a certain extent, but prices are still very unsatisfactory Short time working, which had previously amounted to 50 per cent, has been reduced to 35 or 40 per cent Sales which are at present being effected are mainly for that part of the industry catering for home consumption

Wages, which have not been changed since May last are now at the same level as they were in November, 1926

ITALY

During the third quarter of this year all indices of activity and production in the Italian cotton industry have shown a decline However, it is noted that in the summer months there is always a decline in activity, and this is accentuated during the present period by the application to the whole of the industry of the holiday period granted to the operatives

Towards the end of September there was a certain amount of recovery noticeable

The indices of wages remain the same

The situation as regards the first seven months of this year, as compared with the same period of last year, was as follows

	1931	1932
Yarns (quintals)	156 550	173 491
Fabrics (quintals)	222 636	200 116
Total	379 186	373 607

As regards the export trade, Dr MYLIUS stated that the export of yarn has increased recently, whilst the export of woven goods has been considerably reduced

SPAIN

There has been little apparent change in the cotton industry during the period under review, but production has declined by some 15 per cent compared with normal, owing to the increase of inter-week holidays, reduction of hours in the mills of the centre and highlands, together with the abandonment of shift working all as a consequence of the strict application of old and new social legislation

Wages have not experienced any general alteration, but if any difference is to be mentioned it is in the direction of a slight increase in a few industrial regions, where they have had to be regulated in order to balance the more uniform rates in the neighbouring districts.

The margin of profit, especially as regards spinners, which was considered remunerative, has been sensibly affected by the rise experienced lately in the price of cotton, a rise not reflected by any increase in the sale of the products mentioned.

As regards exports for the quarter, the volume amounted to 2,179,200 kg., representing a diminution of 133,914 kg., in comparison with the figures representing normal exports.

AUSTRIA.

Thirty per cent. of the spindles were indefinitely stopped. The remainder have formed a cartel for the control of production, sales and prices. Spinners seemed quite satisfied with this organization, but more short time was being worked.

FRANCE.

The state of trade in France had slightly improved since August, when the spinning section was working 57 per cent. of full capacity and the weaving section 65 per cent. Prices remained unsatisfactory. Wages have been slightly reduced, viz., generally from 10 to 15 per cent., and there was a tendency towards a further reduction. There was still a negligible quantity of double shift being worked.

UNEMPLOYMENT BENEFIT.

Mr. CASPAR JENNY (Switzerland) was asked to submit his report upon the unemployment payments as affecting the cotton industry. He spoke as follows:—

"The remarkably interesting and carefully prepared statement of Mr. Brasseur prompts me to make the following observations:—

The payments to unemployed workers constitute an important cause of the decline of the cotton industry in Europe. Especially responsible is the English 'dole,' for England was the first country to introduce compensation for unemployment. The enormous growth of overseas productive capacity since the World War has only been possible because large numbers of the population, especially in Great Britain, have not shown the slightest appreciation of the necessity for the adaptation of production costs to the new conditions, a resistance made possible only by the existence of unemployment benefit. As soon as the ratio between prices and wages cost of production became unfavourable, unemployment was bound to increase. If we look back to-day we find ample confirmation of the fact that as soon as the ratio of the cost of living to prices and wages respectively was affected unfavourably, unemployment became intensified. Europe has, for the most part, lost its industrial predominance far more by excessive payments to its unemployed, such as became customary after the war, than by the war itself. The restrictions on the free play of forces on the labour market have facilitated to the utmost degree the building up of an industry overseas. It is the industry's express desire to treat its operatives well, but this is only possible within economic limits. Before the war a victory such as that won for the eight-hour day would have been characterized as a great step forward, and would have required a long period for general application by industry, whereas to-day it is believed by wide circles of the population that, without any reference to the cost of living, wages can be maintained at any level, the State along with industry shouldering the heavy burden of payments to the unemployed. Attention is drawn to the paper published by Professor Charles Rist, entitled "L'Assurance-Chômage, Cause du Chômage Permanent." The unemployment insurance problem ought to be thoroughly discussed at the forthcoming International Cotton Congress in Prague, and the attention of the Governments in those countries which are members of the International Cotton Federation should be drawn to the injurious effects of the whole procedure. I therefore propose that a paper on this subject be prepared by a Swiss economist, and I therefore ask for the requisite information from all affiliated countries to be sent to the Head Office of the International Cotton Federation before December 31, 1932.

The Congress in Prague should also deal with other questions; for example, with that of the night shift. The night shift is absolutely unnecessary in the cotton industry, and should be strictly prohibited in all countries, not only as regards women and children, but as regards all operatives. The abandonment of night-shift working would reduce the productive capacity of the industry by several per cent., but this is in its own interests. Further, the authorities should be approached with a view to the reduction, to two eight-hour shifts, of two-shift working where more than eight hours are worked per shift. There are still countries in which ten or eleven hours per shift are worked—a procedure which cannot be recommended on humanitarian grounds alone. Cessation of two-shift working is neither possible nor desirable, but its limitation to two eight-hour periods would entail a further tolerable reduction of productive capacity. Also as regards the working of single shifts, in many countries more than eight hours per day are worked, and industry cannot understand why a 40-hour week is being asked for as long as there are still a number of countries which are not even considering the adoption of a 48-hour week. Production costs would be raised to a high level even if a wage reduction were to be effected, and it would be impossible to compete with those countries which still worked the longer hours. Overhead charges would remain exactly as they were with the 48-hour week.

But the most important factor which makes the adoption of the 40-hour week impossible is the certainty that by this means the disparity between industrial and agricultural working hours and earnings would be still greater, a factor which is, to a great extent, responsible for the present crisis. The purchasing power of the agricultural working population would again be appreciably reduced if industrial working hours were curtailed. By the introduction of the 48 hour week many agricultural workers were lured into industry, and in spite of great unemployment in all industries, agriculture in many countries is suffering from a shortage of labour owing to the unemployment benefit. But, of course, many workers on account of the shorter working hours in industry have become dissatisfied with agricultural labour, where hours are naturally longer. The consequence of this fact may be further intensified if additional curtailment of the working hours were to take place as regards industry.

FORTY HOUR WEEK

After some discussion the Committee adopted the following resolution upon the 40 hour week as suggested by the International Labour Office:

> "In view of the fact that the 48 hour week is far from being universally adopted, this Committee is of the unanimous opinion that the introduction of a 40 hour week should not even be considered."

FINANCIAL STATEMENT

The Financial Statement was submitted and approved.

RE-ELECTION OF OFFICERS

On the motion of Mr. F. HOLROYD (England), seconded by Mr. JOHN SYZ (Switzerland), it was unanimously resolved to approve the election of all the officials.

STATUTES REVISION SUB-COMMITTEE

On the motion of Mr. F. HOLROYD (England) it was decided that a Sub-Committee composed of Mr. F. Holroyd, the Honorary Secretary, the General Secretary and Mr. John Taylor, the Federation Solicitor, should revise the Statutes and submit their suggestions to the next meeting of the International Cotton Committee.

DATE AND PLACE OF NEXT MEETING

The Committee was pleased to accept the invitation of the Belgian Association to hold its next meeting in Brussels, to take place in March, 1933, at a date to be fixed later.

VOTE OF THANKS

On the motion of Mr. JOHN SYZ (Switzerland) a vote of thanks was passed to the Chairman, Mr. Paul Schlumberger, and carried with acclamation.

The meeting then terminated.

During the evening of October 14 the International Cotton Committee was entertained to a dinner at the Grand and Palace Hotel by the Schweizerischer Spinner, Zwirner und Weber Verein

At this dinner the presentation of a gold semi-hunter watch was made to the immediate Past President, Count Jean de Hemptinne. The presentation was made on behalf of the Committee by Mr. John Syz, who spoke eloquently of the services rendered by Count de Hemptinne to the International Federation since its inception in 1904. The recipient expressed his pleasure with the token of appreciation presented to him, and at the same time he stated that he was doubly pleased to receive it from the hands of his old friend, Mr. John Syz, whom he had known since the first Zurich Congress in 1904. He also reminded those present that Switzerland was the cradle of the International Cotton Federation, for it was at the above Zurich Congress that the International Cotton Federation had been constituted.

RESOLUTIONS ADOPTED AT THE MEETING OF THE SUB-COMMITTEE FOR MOISTURE IN AMERICAN COTTON, HELD ON AUGUST 15, 1932, IN GHENT, FINALLY APPROVED BY THE INTERNATIONAL COTTON COMMITTEE AT ITS MEETING AT LUGANO ON OCTOBER 14, 1932.

There were present at the meeting in Ghent: Monsieur Robert Brasseur, President of the Belgian Association (in the chair), Messrs. Jesse Thorpe, F. W. Oldham (England), Dr. Hendrik van Delden (Germany), Monsieur Alexandre Mabire (France), Mr. Arno S. Pearse (Expert Adviser), Monsieur Pierre de Smet (Secretary of the Belgian Association), and Mr. Norman S. Pearse (General Secretary).

Dr. W. Lawrence Balls, F.R.S., D.Sc., President of the Trustees of the Alexandria Testing House, was also in attendance, by special invitation.

The Sub-Committee was appointed as a result of the resolution passed at the meeting of the International Cotton Committee in London earlier in the year to formulate a uniform method of testing cotton for moisture

The terms of reference were:—

"That a small Sub-Committee be appointed to examine the possibilities of arriving at a uniform method of testing American cotton for moisture content.

"That to this end the affiliated Associations be asked to furnish the Sub-Committee with the exact scientific methods of testing moisture content in their respective countries."

The recommendations finally agreed to were as follows:—

"Resolved that c.i.f. American cotton, wherever possible, should be tested for moisture as soon as convenient after arrival at the port of disembarkation "

NUMBER OF BALES IN SHIPMENT TO BE SAMPLED

"It was agreed that the number of bales to be sampled in each shipment should not be less than 10 per cent "

WEIGHING OF BALES

"It should furthermore be recognized to be very important that the weight of each bale tested should be obtained at the time of sampling, and that the certified weight should appear upon the certificate of test "

SIZE OF SAMPLE

"It was recommended that the sample drawn from each bale should weigh approximately 500 grammes "

SAMPLING

"It was eventually agreed that Samples when drawn will be placed immediately in hermetically sealed canisters specially made for the purpose, and wherever possible weighed at once, canister and cotton together The canister and sample should then be despatched to the testing house, where the whole should be again re-weighed The weight of the cotton to be taken as the difference between the total weight and the weight of the empty canister "

"On the motion of Dr HENDRIK VAN DELDEN, the following further resolution was adopted —

"The method of sampling must obviously depend upon local conditions, but the sample should be representative of the whole bale, and it is suggested that the sampling of a shipment could best be carried out in the following manner From the first bale samples to be taken from beneath the first and third bands, in the second bale, from beneath the second and fourth bands, in the third bale from beneath the third and fifth bands, and so on

"Attention was further directed to the importance of compounding the sample taken from any one bale in such a way that the whole mass of the bale is fairly represented, thus, about one-tenth of the total weight of the bale is in a surface layer only one inch thick, the cube of the distance from the centre indicates the relative amounts which should be taken at various depths below the surface

DRYING TEMPERATURE

"It was recommended that The drying temperature should not exceed 110° C (or 230° F), and should not be less than 105° C (221° F)

"In the opinion of the Sub-Committee, preliminary drying is not objectionable, and saves considerable time while the sample is in the final oven The sample should be dried to constant weight

"The sample should be fluffed out, and put into the oven cage loosely. Attention is directed, however, to the fact that in testing low-grade or sandy cotton every precaution should be taken to prevent loss of these impurities. Loss or gain of water during this filling of the oven cage is immaterial, because the weight has already been obtained before the canister was opened.

METHOD OF CALCULATION.

"It was unanimously agreed that: The percentage moisture should be calculated upon the constant *dry weight* as determined by the oven test, and it is suggested that the following method of calculation is the least complicated:—

Original wet weight	8,000·00 gr.
Weight after drying	7,257·50 ,,
8·5 per cent. of this dry weight	616·88 ,,
Correct condition weight	7,874·38 ,,
Excess of moisture above 8·5 per cent. ..	125·62 ,,
	8,000·00 ,,

$$\frac{\text{The excess moisture } 125\cdot62}{\dfrac{\text{Original wet weight } 8{,}000\cdot00}{100}} = 1\cdot570 \text{ per cent. to be deducted from invoice.}$$

GENERAL OBSERVATIONS.

"The Committee wished particularly to direct attention to the unstable relationship between water and cotton, which is more noticeable in localities where the humidity is very variable. Hence the importance of recording the shipping weight (when obtainable) and the weight of the bale when sampled, as also the precautions recommended against changes after the removal of the sample from the bale."

The Depression in the European Cotton Industry.

Statement prepared by M. ROBERT BRASSEUR, President of the Société Coopérative la Textile, Ghent, for the Meeting of the International Cotton Committee, Lugano, October 14, 1932.

1. *Conclusions to be drawn from the statistics of the International Federation.*

WHEN the statistics of the International Cotton Federation are examined, it is perceived that the causes of the crisis relevant to our own industry are to be sought neither in a rapid and abnormal diminution of consumption nor in an excessive expansion of the means of production. During the past few years the world consumption of cotton, in bales, has hardly varied. It has been as follows:—

1913	23,000,000 bales
1925	23,294,000 „
1932	22,323,000 „

The highest consumption figures were recorded in 1926-27, and reached 26,141,000 bales. In spite of the intensity of the crisis, consumption at present is only 14 per cent below this maximum figure. Expansion of the means of production no longer suffices to explain the depression in our industry. The cotton industry comprised:—

In 1913	143,500,000 spindles
In 1925	160,000,000 „
In 1932	161,000,000 „

From 1913 to 1925, although consumption was relatively stable, the number of spindles rose by 12 per cent. If this unjustified development of the means of production is one of the causes of the difficulties with which our industry was faced well in advance of the general crisis it does not explain the present intensity of short-time working. A more profound examination of the statistics leads to the conclusion that the crisis in the European cotton industry is the result, in the first place, of a displacement of the centres of production, and an excessive expansion of the producing capacity of the extant machinery made possible by working double-shift.

2. *Displacement of Industrial Cotton Centres.*

The statistics for the consumption of cotton by spinners show that, since the war, the European cotton industry has declined, America has hardly maintained her position, whilst Asia is taking a greater and greater part in the total number of bales consumed by the world as a whole. The variations in relative importance of the means of production show an analogous tendency, as is illustrated by the following table:—

	Spindles (per cent)				Consumption (per cent)			
Country	1913	1927	1930	1932	1913	1927	1930	1932
Great Britain	39	36	34	33	19	12	10	11
Other European countries..	30	28	30	31	34	28	32	28
Europe	69	64	64	64	53	40	42	39
America	24	25	24	23	28	31	27	26
	93	89	88	87	81	71	69	65
Asia	7	11	12	13	19	29	31	35
World	100	100	100	100	100	100	100	100

It clearly results from these figures that the industry is developing in Asia to the detriment of Europe, and everything goes to show that the movement will continue. In Asia 20¼ million spindles are established in three great countries having immense potentialities as regards consumption: India, Japan and China. In Europe, on the contrary, 102 million spindles are divided amongst 18 countries which cannot absorb more than a fraction of their production, countries which arm one against the other and exercise a devastating competition in the export markets.

Besides this, whilst in Asia the labour cost is low, and machines work 11 to 17 hours a day and more, the European industry pays large wages, sees its costs burdened with social imposts and heavy taxes, and must face tariffs and monetary restrictions forming stumbling-blocks to every transaction.

The displacement of the centres of production to the Far East is a phenomenon which we are powerless to combat. Yet it is interesting to observe it: it shows that large markets are irredeemably escaping from European hands, and also points out the necessity for the latter to adapt itself to the new conditions.

3. *The Productive Capacity of the Cotton Industry.*

It is interesting to note that by reason of the longer working day the productive capacity of the Asiatic cotton industry is considerable.

In 1913, with 7 per cent. of the world's spindles, the Asiatic spinners supplied 19 per cent. of world consumption. In 1932, with 13 per cent. of the spindles, Asia itself consumed more than one-third of the raw cotton of the world. Europe, on the contrary, although still possessing in 1932 64 per cent. of the world's spindles, only took part in the transformation of 39 per cent. of the world's raw cotton consumption.

From this it results that, for the outlets which remain accessible to it, Europe has command of too large a quantity of the means of production. This state of things is still more aggravated by the fact that after the war numerous European mills were reorganized and considered capable of running double shifts. In times of crisis the mills on single as well as on double shift are working short time, but all are only awaiting the chance to produce more on the slightest sign of increasing demand.

The remedy is not to be sought in an international agreement which attempts to reduce the hours of work. The latter would have as its effect an increase in costs for the European cotton industry, which would make competition with the Asiatic industry even more difficult, the latter never having submitted to the same reduction in working hours.

This measure would incite the European factories to seek to reduce their costs by resorting to several shifts, and the productive capacity of the present plant would again be expanded.

It seems that the position can only be made healthy once again by the disappearance of a portion of the European plant. Unfortunately, the Governments are taking measures (by means of duties) to try and save their national industries; groups are acquiring at low prices businesses which are in liquidation, and are continuing to exploit them; to safeguard certain interests, banks are sustaining enfeebled concerns and permitting them to continue in operation.

Thus, in spite of the contraction in the markets, the plant of the European cotton industry tends to preserve an importance which is no longer justified.

4. *Examination of New Facts and Recent Measures Meriting Attention.*

It is interesting to consider what reactions this situation has provoked in certain of the countries of Europe and to discuss at our meetings the measures relied on by governments or groups to remedy it.

As regards the latter, we may mention, since our last meeting:

In *Great Britain*, the plan proposed by the Joint Committee of Cotton Trade Organizations.

In *Italy*, the law of June 16, 1932, relative to industrial consortiums.

In *Germany* and *Switzerland*, the measures taken to prevent the export of used machinery.

1. It will be remembered that the *plan proposed by the Joint Committee of Cotton Trade Organizations* did not receive an adequate percentage of votes to obtain the legislative sanction promised its supporters.

2. The *Italian law of June 16, 1932, relative to industrial consortiums, should receive equal attention.*

This law reserves to the Government the right to limit the extension of certain industries, whose expansion would appear prejudicial to the general interest. It provides for the obligatory constitution of consortiums set up to discipline competition and production in cases where such a step is desired by 70 per cent. of the enterprises in any one specified branch of the industry.

Thus, then, a Government, convinced in certain cases of the necessity of curtailing industrial expansion, and backed by a majority of those interested, substitutes its will for that of the minority and imposes on private enterprises such measures as it considers salutary for the common good.

In many of the difficulties confronting the application of such a procedure in any country not already prepared for it by a severe discipline, the dangers attending the interference of the State in private enterprise should not be disregarded.

In spite of everything, the Italian system presents certain advantages over plans of private origin.

3. The German and Swiss Governments are also concerned about the excessive expansion of industrial plant. Too often, in an industry which is displaced as easily as the textile industry, foreigners buy up cheaply old machinery and install it in countries which are only industrialized in a small way. Thanks to the immediate protection of tariffs, the young industry rapidly increases its production, to the detriment of the cotton industry in other lands.

To remedy this, the German Government has decreed that the *export of certain classes of old machinery—textile machinery included—shall be taxed.* The taxes have a prohibitive character when they deal with the export to foreign countries of a complete manufacturing plant or an important part of a plant. The Swiss have put a similar stop to the export of machinery connected with certain traditionally national industries.

These decrees are evidently destined to injure certain private interests, but they tend to avoid the creation or development of new centres of competition, and that is the chief point with which we are concerned. It is interesting to note that in Great Britain there is a movement to draw attention to the danger arising from the export of old machinery.

5. *What Conclusions are to be drawn from the Preceding Observations?*

The European cotton industry has lost important outlets, and an objective analysis of economic phenomena shows that it will lose still more of them. However, as things actually are, its plant tends to retain its relative importance, and this is actually increased by the double-shift working practised in certain countries.

What can be hoped for in the future from an industry which, possessing more than two thirds of the plant of the world, sees its markets reduced to less than 40 per cent of the world's consumption? European mills will be condemned to be idle as long as redundant machinery has not been destroyed. To eliminate the surplus spindles, joint plans seem to be desirable, such as were recently suggested by Mr. Barlow, President of the Manchester Chamber of Commerce.

But their success pre-supposes, above all, the support of the national associations. Can this be obtained by voluntary co-operation of all interested parties or will it result from Government intervention, when it is remembered that a minority can prevent, by obstruction or abstention, the carrying out of a plan that is beneficial to all? Italy has chosen the latter way by her law relative to industrial consortiums, and Poland, by imposing a tax on raw material supplied to all outside the cotton cartel. This was also the tendency of the Joint Committee's plan. Be that as it may, the problem is complex, and a solution is not evident at first glance. But the question is so serious that it must have the entire attention of our Federation, and it seems to me desirable that it should be included in the agenda of all meetings of our Committee until the cotton crisis comes to an end.

Careful examination of the facts, the exchange of ideas, will perhaps throw some light on the remedies for this evil, and we may be permitted to hope that our deliberations will one day bring us definite results.

La Depression Dans L'Industrie Cotonnière Européenne.

1. *Conclusions qui se dégagent des statistiques de la Fédération Internationale*

Lorsque l'on examine les statistiques de la Fédération Internationale Cotonnière, on constate que les causes de crise propres à notre industrie ne doivent être recherchées ni dans une diminution brusque et anormale de la consommation, ni dans une augmentation excessive de l'outillage

Durant ces dernières années, la consommation du monde en balles de coton n'a guère varié. Elle était de : —

23,000,000 balles en 1913
23,294,000 „ 1925
22,323,000 „ 1932

La plus forte consommation a été enregistrée en 1926-27 et a atteint 26,141,000 balles. Malgré l'intensité de la crise, la consommation actuelle n'est que de 14 pour cent inférieure aux chiffres les plus élevés. L'augmentation de l'outillage ne suffit pas devantage à expliquer la dépression de notre industrie :—

L'industrie cotonnière comptait : —

143,500,000 broches en 1913
160,000,000 „ 1925
161,000,000 „ 1932

De 1913 à 1925 bien que la consommation fut relativement stable, le nombre des broches a augmenté de 12 pour cent. Si ce développement injustifié de l'outillage peut être une des causes des difficultés que rencontrait déjà notre industrie bien avant l'éclosion de la crise générale, il n'explique pas l'intensité actuelle du chômage.

Un examen plus approfondi des statistiques amène à conclure que la crise dans l'industrie cotonnière européenne résulte en ordre principal d'un déplacement des centres industriels de production et d'un accroissement excessif de la capacité de production de l'outillage par suite du travail à double équipe.

2. *Déplacement des Centres industriels Cotonniers.*

Les statistiques de la consommation du coton par les filatures montrent que, depuis la guerre, l'industrie cotonnière européenne est en recul, l'Amérique maintient à peine ses positions, tandis que l'Asie prend une part de plus en plus grande du total mondial des balles consommées. Les variations dans l'importance relative de l'outillage marquent une tendance analogue, ainsi qu'il ressort du tableau suivant :—

	Broches				Consommation			
	1913	1927	1930	1932	1913	1927	1930	1932
Pays	%	%	%	%	%	%	%	%
Grande Bretagne	39	36	34	33	19	12	10	11
Autres Pays d'Europe ..	30	28	30	31	34	28	32	28
Europe	69	64	64	64	53	40	42	39
Amérique	24	25	24	23	28	31	27	26
	93	89	88	87	81	71	69	65
Asie	7	11	12	13	19	29	31	35
Monde	100	100	100	100	100	100	100	100

Il résulte clairement de ces chiffres que l'industrie se développe en Asie au détriment de l'Europe et tout fait prévoir que ce mouvement se poursuivra. Que voyons-nous en effet ?

En Asie, 20½ millions de broches sont etablies dans trois grands pays ayant des possibilités immenses de consommation ; les Indes, le Japon et la Chine. En Europe par contre, 102 millions de broches sont réparties entre 18 pays, ne pouvant absorber qu'une partie de leur production, s'armant les uns contre les autres et se faisant une concurrence épuisante sur les marchés d'exportation.

En outre, tandis qu'en Asie, le coût de la main d'oeuvre est peu élevé et que les machines travaillent de onze à dix-sept heures part jour et plus, l'industrie européenne paie de gros salaires, voit son prix de revient grevé par des charges sociales et de lourds impôts et doit faire face à des mesures douanières et des restrictions monétaires qui entravent ses transactions.

Le déplacement des centres de production vers l'Extrême-Orient est un phénomène que nous sommes impuissants à combattre. Toutefois, il ne manquait pas d'intérêt de le mettre en évidence ; il démontre que de grands marchés échappent irrémédiablement à l'industrie européenne et fait apparaître la nécessité pour celle-ci de s'adapter aux conditions nouvelles.

3. *La capacité de production de l'industrie cotonnière.*

Il est intéressant de noter qu'en raison de la longueur de la journée de travail, la capacité de production de l'industrie cotonnière asiatique est considérable.

En 1913, avec 7 pour cent des broches du monde, les filatures de l'Asie participaient à concurrence de 19 pour cent dans la consommation mondiale du coton. En 1932, avec 13 pour cent des broches, l'Asie consommait à elle seule plus du tiers des balles de coton.

L'Europe par contre, quoique disposant encore en 193 de 64 pour cent des broches du monde, n'intervient plus que pour 39 pour cent dans la transformation du coton brut.

Il résulte de ceci que, pour les débouchés qui lui restent accessibles, l'Europe dispose d'un outillage trop abondant. Cet état de choses est encore aggravé par le fait qu'après la guerre, de nombreuses usines européennes se sont réorganisées et ont cru devoir intensifier le travail en double équipe. En temps de crise, les usines travaillant tant en simple qu'en double équipe font du chômage, mais toutes n'attendent que l'occasion de produire davantage à la moindre reprise de la demande.

Le remède ne peut être cherché dans une convention internationale tendant à réduire le temps de travail. Celle-ci aurait pour effet d'augmenter le prix de revient de l'industrie cotonnière européenne, ce qui rendrait encore plus difficile la concurrence avec l'industrie cotonnière asiatique qui ne s'est pas soumise dans le passé à la même réduction des heures de travail.

Cette mesure inciterait les usines européennes à chercher à réduire leur prix de revient en accentuant le travail à plusieurs équipes et la capacité de production de l'outillage s'en trouverait encore augmentée.

Il semble que la situation ne peut s'assainir que par la disparition d'une partie de l'outillage européen. Malheureusement, les gouvernements prennent des mesures douanières pour essayer de sauver leur industrie nationale, des groupes reprennent à bas prix des affaires en liquidation et en continuent l'exploitation pour sauvegarder certains intérêts, des banques soutiennent des usines défaillantes et leur permettent de prolonger leurs opérations.

Ainsi, malgré le rétrécissement des marchés, l'outillage de l'industrie cotonnière européenne tend à conserver une importance qui ne se justifie plus.

4. *Examen des faits nouveaux et des mesures récentes méritant de retenir l'attention.*

Il est intéressant que nous recherchions quelles réactions cette situation a provoquées dans certains pays d'Europe et que nous discutions au cours de nos réunions les mesures préconisées par des Gouvernements ou par des Groupements pour y porter remède.

Dans cet ordre d'idées, on peut mentionner depuis notre dernière réunion :

En Grande-Bretagne, le plan proposé par le Joint Committee of Cotton Trade Organisations ;

En Italie, la loi du 16 juin 1932 relative aux consortiums industriels ;

En Allemagne et en Suisse, les mesures prises pour entraver l'exportation de l'outillage usagé.

1° On se souvient de ce que *le plan proposé par le Joint Committee of Cotton Trade Organisations* ne réunit pas un pourcentage suffisant de suffrages pour obtenir l'aide législative promise à ses promoteurs.

2° *La loi italienne du* 16 *juin* 1932 *relative aux consortiums industriels* doit également retenir l'attention.

Cette loi réserve au Gouvernement le droit de limiter l'extension de certaines industries dont l'expansion paraît préjudiciable à l'intérêt général. Elle prévoit la constitution obligatoire de consortiums destinés à discipliner la production et la concurrence au cas où cette constitution serait requise par 70 pour cent des entreprises d'une branche déterminée de l'industrie.

Ainsi donc, un Gouvernement, convaincu de la nécessité de freiner dans certains cas l'expansion industrielle, et fort de l'appui d'une majorité des intéressés, substitute sa volonte à celle de la minorité et impose aux entreprises particulières les mesures qu'il estime salutaires pour le bien commun.

En plus des difficultés d'application d'une telle procédure dans tout pays qui n'y serait pas préparé par une discipline sévère, il ne faut pas se dissimuler les dangers que comporte l'ingérence de l'Etat dans les entreprises privées.

Malgré tout, le système italien présente certains avantages sur les plans d'origine privée.

3°. Les Gouvernements allemand et suisse se sont également préoccupés de l'extension excessive de l'outillage industriel. Trop souvent, dans une industrie qui se déplace aussi facilement que l'industrie textiel, des étrangers rachètant a bon compte des machines usagées et installent celles-ci dans des pays peu industrialisés. Grâce à l'appui immédiat des droits de douane, la jeune industrie accroît rapidement sa production au détriment de l'industrie cotonnière des autres pays.

Pour remédier à cette situation, *le Gouvernement allemand a décrété que les exportations de certaines classes de matériel usagé-parmi lesquelles le matériel textile — seraient taxées.* Les taxes ont un caractère prohibitif quand il s'agit de l'expédition à l'étranger de toute une installation de fabrique ou d'une partie importante d'une installation. La Suisse a pris un arrêté analogue pour les machines de certaines industries traditionnellement nationales.

Ces décrets sont évidemment de nature à léser certains intérêts particuliers; mais ils tendent à éviter la création ou le développement de nouveaux centres de concurrence et c'est le point principal qui nous occupe. Il est intéressant de noter qu'en Grande Bretagne, des voix s'élèvant pour signaler le danger des exportations de matériel usagé.

5. *Que retiendrons-nous de ce qui précède?*

L'industrie cotonnière européenne a perdu de grands débouchés et une analyse objective des phénomènes économiques montre qu'elle en perdra davantage encore.

Cependant, dans l'état actuel des choses, son outillage tend à conserver son importance relative et celle-ci est encore accrûe par travail en double équipe pratiqué dans certains pays.

Que peut-on espérer de l'avenir d'une industrie qui, disposant de plus des deuxtiers de l'outillage mondial, voit ses débouchés réduits à moins de 40 pour cent de la consommation du monde?

Les usines européennes seront condamnées à végéter tant que l'outillage surabondant n'aura pas été détruit.

Pour éliminer les broches en excès, des plans d'ensemble paraissent désirables, ainsi que le rappelait dernièrement M. Barlow, Président de la Chambre de Commerce de Manchester.

Mais leur réalisation suppose avant tout le renforcement des associations nationales. Celui-ci peut-il être obtenu par une coopération volontaire de tous les intéressés ou résultera-t-il d'une intervention gouvernementale, s'il est reconnu qu'une minorité empêche, par son abstention ou son obstruction, la réalisation d'un plan salutaire pour tous? C'est dans cette dernière voie que s'orientent l'Italie, par la loi sur les Consortiums Industriels, et la Pologne, en frappant les outsiders du cartel cotonnier d'une taxe sur la matière première. C'était également la tendance du plan du Joint Committee.

Quoiqu'il en soit, le problème est complexe et sa solution n'apparaît pas au premier'abord. Mais la question est trop grave pour que notre Fédération ne lui consacre pas son entière attention et il me paraît désirable qu'elle soit inscrite à l'ordre du jour de toutes les réunions de notre Comité, tant que la crise cotonnière ne sera pas résolue.

L'examen attentif des faits, l'échange des idées nous éclaireront peut-être sur les remèdes à apporter au mal et il est permis d'espérer que nos délibérations nous conduiront un jour à des résultats positifs.

Note on the Proposal for an International Cotton Agreement.

Statement prepared by M. ROBERT BRASSEUR, President of the Société Cooperative la Textile, Ghent, for the Meeting of the International Cotton Committee, Lugano, October 14, 1932.

ON the occasion of the London meeting of the International Cotton Committee, in February, 1932, we examined succinctly the remedies for the cotton crisis which were suggested to the Paris Congress by the various National Associations.

Convinced that the cotton industry is suffering particularly from the fetters placed on international exchange, we set out to discover the means of lessening, for our products, the effects of protectionism, and we have indicated the direction which, in our opinion, must be taken if practical results are to be obtained.

We are happy to believe that several delegates agreed in principle with the sentiments of the Association Cotonnière de Belgique with regard to the repercussions of protectionism on the cotton crisis. However, our suggestion had to be studied by the delegates in order that the latter might give an opinion taking account of the possibilities with regard to, and the desiderata for, national industries.

Since the London meeting and the dispatch of our letter, a new fact has arisen: namely, the agreement reached at Ouchy between the Belgian and Dutch Governments.

Let us call to mind briefly that, by this convention, the signatories undertake to diminish their tariff duties by 10 per cent. per annum during a period of five years. Customs dues should not be diminished below a level corresponding to 4 per cent. *ad valorem* for semi-manufactured products, and 8 per cent. *ad valorem* for wholly manufactured products

The convention is open for the adherence of any country, but only the signatory countries benefit by the reduction of duties. The goodwill of countries desirous of returning to a more liberal tariff policy is thus stimulated.

In the note presented at the London meeting we said, speaking of agreements making for the reciprocal reduction of duties: "It seems that the collective agreements proposed need in no way have general significance; they may be restricted to certain categories of products, and this augments very much their chances of practical realization."

These agreements on specified products were provided for by the Ouchy agreement, the latter having the following "declaration" annexed: "The high contracting parties reserve to themselves the right to reduce amongst themselves, *following particular agreements open to all countries*, their import duties on certain goods, procedure being otherwise than provided for by Article 2 of the present agreement. These reductions will apply to all the countries of the third part which have adhered to the particular agreements in question, *whether or not they are parties to the present convention.*"

The Ouchy agreement thus reserves for us the possibility of realizing an international agreement following on lines which we should ourselves suggest.

* * *

We make a fresh appeal to the spirit of collaboration amongst the members of the Committee to support our projects. The resolutions of the Assembly of the League of Nations and the recommendations of economic experts most qualified to advise must not be made in vain.

Europe is becoming more and more aware of the fact that the duties and restrictions have only aggravated the crisis, and even in the very countries which have been traditionally attached to protectionist ideas authoritative voices are recommending a return towards a more liberal policy as regards international trade.

In France, M. Herriot denounces the dangers of a closed economy, and M. Le Trocquer, former Minister and President of the European Customs Union, extols again the *entente* between the agricultural producers of Europe. Finally, the French Wool Association has adhered in principle to an agreement similar to that which we have outlined.

Elsewhere, in Great Britain also, exacerbation of economic nationalism is expressed. On the occasion of our London meeting Mr. Runciman expressed the hope that nations would be better able to see their own interests, and he registered the vow that he would see that international negotiations took some of the excessive character from tariff restrictions. On his side, Mr. Barlow, President of the Manchester Chamber of Commerce, subsequently expressed the hope that the Ottawa Conference would leave England free to negotiate with the foreigner with a view to a reduction of the tariff duties. Several days later Lord Grey returned to this idea. "After the Ottawa Conference is closed," he said, "the task of our Government will be to work for the reduction of tariff walls and the suppression of obstacles which hinder international transactions."

Our proposition of a Cotton Convention tends to the same goal. The problem is certainly complex, and the realization of our project will entail many difficulties: amongst the latter the question of the necessary derogation of the clause respecting the most-favoured-nation should receive special attention.

We propose that the question as a whole should be examined by a Commission on which, besides the official delegates of the Associations interested in our proposals, there should sit experts on matters of tariff questions.

This Commission would have to study the methods and importance of reductions in tariffs such as affect the realization of a

Cotton Pact. It is to be hoped that their labours will not be sterile and that they will lead to the formulation of a project to which the interested Associations can adhere.

The following is the original French report.

NOTE SUR LA PROPOSITION D'UNE CONVENTION INTERNATIONALE COTONNIÈRE

A l'occasion de la réunion du Comité International Cotonnier tenue à Londres en février 1932, nous avons examiné succinctement les remèdes à la crise cotonnière suggérés au Congrès de Paris par les diverses Associations Nationales.

Convaincus de ce que l'industrie cotonnière européenne souffre tout particulièrement des entraves mises aux échanges internationaux, nous nous somes attachés à rechercher le moyen d'atténuer pour nos produits les effets du protectionnisme et nous avons indiqué dans quelle voie il nous paraissait souhaitable de s'engager si l'on voulait aboutir à des résultats pratiques.

Nous avons été heureux de constater que plusieurs délégués partageaient en principe le sentiment de l'Association Cotonnière de Belgique à l'égard des répercussions du protectionnisme sur la crise cotonnière. Cependant notre suggestion demandait à être étudiée par les délégués afin que ceux-ci puissent donner à ce sujet un avis tenant compte des possibilités et des desiderata des industries nationales.

Depuis la réunion de Londres et l'envoi de notre lettre aux délégués un fait nouveau important s'est produit : c'est l'accord paraphé à Ouchy par les représentants des Gouvernements Hollandais et Belge.

Rappelons brièvement que par cette convention les pays signataires s'engagent à diminuer leurs tarifs douaniers de 10 pour cent par an pendant cinq ans. Les droits de douane ne devront pas être réduits en dessous d'un niveau correspondant à 4 pour cent *ad valorem* pour les produits demi-ouvrés et 8 pour cent *ad valorem* pour les produits entièrement ouvrés.

La Convention est ouverte à l'adhésion de tous les États, mais seuls les pays signataires bénéficient de la réduction des droits. Ainsi se trouve stimulée la bonne volonté des pays désireux d'en revenir à une politique douanière plus libérale.

Dans la note présentée à la réunion de Londres nous disions, parlant des conventions visant à l'abaissement réciproque des droits : "Il semble que les accords collectifs envisagés n'ont d'ailleurs pas besoin d'avoir une portée générale ; ils peuvent être restreints à certaines catégories de produits et ceci augmente beaucoup leurs chances de réalisation pratique."

Ces accords sur des produits déterminés ont été prévus dans la convention d'Ouchy, celle-ci comportant la "déclaration annexe" suivante : "Les hautes parties contractantes se réservent la faculté de réduire entre elles à la suite *d'accords particuliers ouverts à tous les États* leurs droits d'entrée sur certaines marchandises suivant d'autres modalités que celles prévues à l'article 2 de la présente Convention. Ces réductions seraient étendues à tous les États tiers qui ont adhéré aux accords particuliers dont il s'agit, *qu'ils soient ou non parties à la présente Convention*."

La Convention d'Ouchy nous réserve ainsi la possibilité de réaliser un accord international suivant des modalités que nous pourrions suggérer nous-mêmes.

* * *

Nous faisons de nouveau appel à l'esprit de collaboration des membres du Comité pour qu'ils appuient nos projets. Les résolutions de l'Assemblée de la Société des Nations, les recommandations concordantes des experts économiques les plus qualifiés ne peuvent rester vaines.

L'Europe se rend de plus en plus compte que les droits et restrictions douanières n'ont fait qu'aggraver la crise et dans les pays même qui sont traditionnellement attachés aux idées protectionnistes, des voix autorisées recommandent le retour des peuples vers une plus grande liberté des échanges.

En France, c'est M. le President Herriot qui dénonce les dangers de l'économie fermée et M. Le Trocquer, ancien ministre et président de l'Union Douanière Européenne, préconise de même l'entente entre les producteurs agricoles d'Europe. Enfin, l'Association française de la Laine a adhéré en principe à une convention semblable à celle que nous avons esquissée.

D'autre part, en Grande Bretagne aussi, le nationalisme économique des peuples est stigmatisé. A l'occasion de la réunion de notre Comité à Londres, M. Runciman exprimait léespoir que'les Nations puissent mieux se rendre compte de leurs intérêts veritables et il émettait le voeu de voir des négociations internationales enlever aux restrictions douanières le caractère excessif qui leur a été conféré. De son côté, M. Barlow, président de la Chambre de Commerce de Manchester, exprimait dernièrement l'espoir que la Conférence d'Ottawa laisserait l'Angleterre libre de négocier avec l'étranger en vue de la réduction des droits de douane. Quelques jours plus tard, Lord Grey reprenait cette idée : " Dès que la Conférence d'Ottawa aura clôturé ses travaux, disait-il, la tâche de notre Gouvernement sera de travailler à l'abaissement des barrières douanières et à la suppression des obstacles qui gênent nos transactions."

C'est à pareil but que tend notre'proposition de Convention Cotonnière. Le problème est complex, certes, et la réalisation de notre projet soulèvera bien des difficultés d'application : parmi celles-ci, la question de la dérogation nécessaire à la Clause de la Nation la plus favorisée devra retenir tout spécialement notre attention.

Nous proposons que l'ensemble de la question soit examiné par une Commission dans laquelle, à côté des délégués officiels des Associations intéressées par nos suggestions, siègeraient des personnes spécialisées dans les questions douanières.

Cette Commission aurait à étudier les modalités et l'importance des réductions tarifaires qu'une Convention Cotonnière devrait comporter. Il est permis d'espérer que ses travaux ne seront pas stériles et qu'ils aboutiront à la réduction d'un projet auquel les Associations intéressées pourront adhérer.

(Other State of Trade reports were submitted at the meeting of the International Cotton Committee in Lugano and will be found on pp. 9-11.)

AUSTRIA.

COTTON SPINNING

Since the beginning of the current year the business of the Austrian cotton spinning establishments has suffered a very severe set back. For the seven months up to and including July sales of yarn to the inland market were only equal to the amount sold during the last three months of 1931, a decrease of 50 per cent. on the corresponding period last year.

As regards the export of cotton yarns the total for the seven months of the current year was about 14 400 metric quintals, as against 22 400 metric quintals in the same period of the previous year. There has thus also been a fall of 50 per cent. in exports. These conditions have compelled a fresh curtailment of yarn production to the amount of 30 per cent. since the commencement of the year. The industry is now working at about 43 per cent. of its full capacity.

COTTON WEAVING

The activity of the weaving establishments has also been affected unfavourably owing, in the first place, to the fact that the consuming capacity of the Austrian population has experienced a considerable decline. Besides this, a natural reaction has set in since the more speculative dealings which were induced by the restrictions on foreign bills in the last quarter of 1931, since goods could only be disposed of very slowly, and for the most part are still in the stocks of the agents and wholesalers. The outlook for the near future is not encouraging. The recent rise in the business tax (*Umsatzsteuer*) to more than 100 per cent. of its former value has been especially detrimental to business. On manufactured cotton piece goods there is a tax equal to 15 per cent. of their value, and it is understandable that the imposition of such a tax on trade and on consumption must, under the circumstances, lead to great difficulties. In the first seven months of the current year imports were as follows, compared with the same period of the preceding year:—

	1932	1931
Grey Cloth	16 527	24 248
Bleached cotton fabric	3 114	5 107
Dyed cotton fabric	2 377	4 383
Printed cotton fabric	1 111	2 760
Coloured cottons	4 176	12 401
Total	27 305	48 890

The decline in the imports of fabrics amounted, therefore, to about 44 per cent. up to the end of July, 1932. Owing to the fall in the raw cotton market, prices were influenced considerably, so that there was a marked surplus on offer in almost all qualities, in spite of the decline in the volume of imports and the quota system. Most sales, therefore, were made at under the cost of production. All these circumstances have forced the mills (which normally can only just meet the internal demand with the number of looms at their disposal) to curtail production. Since the beginning of the year this reduction has amounted to about 25 per cent. of the production at that date.

The original text in German runs as follows :—

BAUMWOLLSPINNEREI.

Seit Beginn des laufenden Jahres hat die Beschaftigung der osterreichischen Baumwollspinnereien einen sehr empfindlichen Rückgang erfahren. In 7 Monaten, also bis einschliesslich Juli, wurde am Inlandsmarkte ein Garnquantum abgesetzt, welches dem Verkauf der letzten drei Monate des Jahres 1931 entsprach, was also gegenüber dieser Periode einen Ausfall um nahezu 50 % bedeutet.

Was die Ausfuhr von Bauswollgarnen betrifft, so hat dieselbe in 7 Monaten des laufenden Jahres rund 14,400 mq. erreicht, gegenüber 22,400 mq. in der gleichen Periode des Vorjahres. Der Export-Rückgang beträgt sohin Gleichfalls cca. 50 %. Diese Verhältnisse haben zu einer neuerlichen Einschränkung der Garnproduction gezwungen, u.zw. um nahezu 30 % seit Jahresbeginn. Gegenüber der vollen Erzeugung betragt die Einschränkung ungefähr 43 %.

BAUMWOLLWEBEREI.

Auch die Beschaftigungslage der Weberei ist eine überaus ungünstige geworden, was in der Hauptsache darauf zurückzuführen ist, dass die Konsumkraft der österreichischen Bevölkerung in rascher Rückbildung begriffen ist. Ueberdies ist nach den mehr spekulativen Eindeckungen, welche der Handel und die Konfektion anlässlich der Devisenverkehrsbeschränkungen im letzten Quartal 1931 durchgeführt hatte, eine natürliche Reaktion eingetreten, weil die auf Lager genommenen Waren nur äusserst langsam abgestossen werden können und sich zum grossen Teil noch jetzt in den Händen der Grossisten und Detailleure befinden. Die Aussichten für die nächste Zeit sind leider der Arbeitslosigkeit, verbunden mit Lohn- und Gehaltskürzungen, sowie mit empfindlichen Steuererhöhungen zwangslaufig zu einer weiteren Herabminderung der Konsumkraft führen muss. Ganz besonders drückend hat sich die neuerliche Erhöhung der Warenumsatzsteuer um mehr als 100 % des früheren Ausmasses ausgewirkt. Auf fertigen Baumwollgeweben lastet derzeit eine Umsatzsteuer von 15 % des Wertes, und es ist begreiflich, dass die Ueberwälzung eines solchen Zuchlages auf Handel und Konsum unter den gegebenen Verhältnissen auf die grössten Schwierigkeiten stossen muss. — In den ersten 7 Monaten des laufenden

Jahres wurden gegenuber der gleichen Periode des Jahres 1931 eingefuhrt

	1932 gegenuber	1931
Rohe Baumwollgewebe	16 527	21 218
gebleichte Baumwollgewebe	3 111	5 107
gefarbte Baumwollgewebe	2 377	4 383
bedruckte Baumwollgewebe	1 111	2 700
buntgewebte Baumwollgewebe	4 176	12 101
	27 30[illegible]	48 899

Der Ruckgang in der Gewebeeinfuhr hat daher bis Ende Juli cca 44 % betragen. Durch den Absatzruckgang in Geweben wurde die Preisbildung empfindlich beeinflusst, zumal sich trotz Einfuhrruckganges, bezw. Kontingentierung des Importes ein bedeutendes Ueberangebot in fast allen Qualitaten ergeben hat. Ein Grossteil der Verkaufe wird daher unter den Selbstkosten der Erzeuger abgeschlossen. Alle diese Umstande haben zur Folge, dass die osterreichischen Baumwollwebereien, welche normalerweise den Inlandsbedarf mit den vorhandenen Stuhlen nur knapp zu decken vermogen, zur Einschrankung der Produktion gezwungen sind. Seit Jahresbeginn durfte diese Reduktion ungefahr 25 % des damaligen Produktionsstandes erreicht haben.

(*Verein der Baumwollspinner und Weber Oesterreichs.*)

BELGIUM.

The activity of the Belgian cotton industry has been influenced by the fluctuations in the raw cotton market. In consequence of the rise in prices, and after a certain amount of hesitation due to lack of confidence on the part of buyers in the stability of the market the demand for yarns increased during the month of August.

Spinners worked less short time and actually their running-time amounted to from 65 to 70 per cent. of normal capacity. Prices, however, remain poor.

It is not possible to determine exactly the degree of activity in the weaving section, the situation varying perceptibly from one firm to another, it can be estimated, however, that, in the main, the short time in the weaving section attains to about the same level as that put into operation by the spinners.

The Belgian cotton industry has made no wages modifications since May last. Wages are at present at the level they were in November, 1926.

The following is the original report in French :—

L'activite de l'industrie cotonniere belge a éte influencee par les fluctuations du marche des cotons bruts. Par suite de la hausse des cours et après certaines hesitations dûes aumanque de confiance des acheteurs dans la fermeté du marché, les demandes de files ont augmente dans le courant du mois d'août.

Les filatures chôment moins et, actuellement, leur activite atteint de 65 à 70 pour cent de leur capacité de production.

Toutefois, les prix destent mauvais.

Il n'est pas possible de déterminer exactement le degré d'occupation des tissages, la situation variant sensiblement d'une usine à l'autre; on peut estimer cependant que, dans l'ensemble, le tissage chôme à peu près autant que la filature.

L'industrie cotonnière belge n'a pas enregistré de modifications de salaires depuis le mois de mai dernier. Les salaires sont au niveau qu'ils atteignaient en novembre 1926.

(*Société Coopérative Association Cotonnière de Belgique.*)

CHINA.

The cotton market in China has recently been greatly subjected to stress owing to the slump in the price of American cotton and decreasing stocks of Chinese varieties. The price fluctuations of American cotton always have an important influence on Chinese cotton prices. For the time being there is no indication of any improvement in the local cotton market until the American cotton crop is definitely known. For the home-grown staple, however, there has been an inactive market on account of comparatively high prices and large stocks of foreign cotton in practically every cotton mill, particularly in Shanghai cotton mills. Most mills follow their usual conservative policy of avoiding buying the raw material on a large scale in view of the instability of the yarn market. The "wait and see" attitude of the various mills, in consequence of the worldwide weakness of the market, is firmly maintained.

The demand for cotton yarn during the past months has been small, due to the tight money market and to depreciated purchasing power in the interior among the farming and labouring classes who are usually large consumers of domestic products. The dumping of Japanese yarn in the North China market has reduced the demand from that source for Chinese yarn to almost nothing. The purchasing power in the Yangtsze Valley has not yet been restored since the floods of last autumn. Fortunately, the demand from South China, particularly Kwangtung province, has been very brisk, though transactions have been done on a small scale only. The prospect for future business, therefore, is still dark. Notwithstanding the temporary revival, however, there is no sign of permanent improvement. The decline of the Chinese silk trade, the ever increasing poverty among the farming population, and above all, the ever increasing competition of Japanese mills with their "dumping" in many parts of China, have darkened all hopes of future improvement.

(*Chinese Cotton Mill Owners' Association.*)

FRANCE.

The very unhappy situation detailed in the preceding Bulletin for the second quarter of 1932 persisted during July. The rise in the price of raw cotton experienced in August entailed a better demand, but this revival slackened considerably when cotton fell again.

Prices naturally follow the cost of the raw material but the slight improvement in the margin was only partially maintained, and prices continue to be mediocre.

A certain increase in activity is to be observed. According to our latest statistics, which bring us to the end of August the percentage of activity in production is only about 57 per cent for the spinning section, 49 per cent for doubling and 65 per cent for weaving

No reductions of wages have taken place since the last report

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The table of imports and exports will be found in the original French report which follows

La très mauvaise situation signalée dans le précédent Bulletin pour le second trimestre de 1932 a persisté pendant le mois de juillet — Ensuite la hausse du coton brut survenue en août a provoqué une meilleure demande mais ce mouvement de reprise s'est d'ailleurs considérablement ralenti lorsque les cours du coton ont baissé à nouveau

Les prix s'inscrivent naturellement avec une augmentation corrélative à la hausse de la matière première La légère amélioration de la marge de fabrication qu'on avait pu constater ne s'est que partiellement maintenue et les prix continuent à être médiocres

On constate une certaine régression du chômage D'après nos dernières statisques, qui remontent à la fin du mois d'août, le pourcentage d'activité des unités de production est d'environ 57 pour cent pour la filature, de 49 pour cent pour le retordage et 65 pour cent le tissage

Aucune réduction de salaires n'est intervenue depuis la publication du dernier Bulletin

COMMERCE EXTÉRIEUR

(Foreign Commerce)

	2ème trimestre (2nd quarter) 1931	1932
	Quintaux métriques (metric quintals)	
A IMPORTATIONS (Imports)		
1 Fils de coton (Cotton yarn	5 623	1 710
2 Tissus de coton et autres articles manufacturés (Cotton cloth and other manufactured goods)	8 196	1 306
B EXPORTATIONS (Exports)		
1° Fils de coton exportations totales (Cotton yarn—total exports)	22 135	19 224
Destinations		
Algérie Colonies françaises et pays de protectorat (Algeria French colonies and protectorate countries)	1 873	2 706
Marchés étrangers (Foreign markets)	17 501	14 112
2° Tissus de coton et autres articles manufacturés exportations totales (Cotton cloth and other manufactured goods—total exports)	102 588	91 862
Destinations		
Algérie Colonies françaises et pays de protectorat (Algeria French colonies and protectorate countries)	68 405	68 098
Marchés étrangers (Foreign markets)	34 183	23 764

(Syndicat Général de l'Industrie Cotonnière Française)

GERMANY.

WEAVING SECTION

The unsatisfactory position of the cotton industry in South Germany persisted till the third quarter of 1932 and led to the continuation up to August 1932, of the curtailment mentioned in the last report which imposed on the South German and Westphalian weaving establishments various degrees of short time working up to 20 of the (already curtailed) production. In connection with the rise in price of raw material and the somewhat more favourable outlook generally, demand increased during August, so that at the end of the quarter the orders on hand were of greater amount than at the end of the first and second quarters of 1932. The degree of activity of the mills rose somewhat as a consequence and amounted towards the end of the period under review to some 70 of full capacity. An improvement in weaving margins could unfortunately not be obtained. As hitherto, these are absolutely unsatisfactory and insufficient.

The following is the original report in German

Die unbefriedigende Geschaftslage der suddeutschen Baumwollindustrie hat zu Beginn des 3. Quartals 1932 angehalten und dazu gefuhrt, dass die in dem letzten Bericht erwahnte Betriebseinschrankung in der suddeutschen und westfalischen Baumwollweberei, die gestaffelte Einschrankungssatze bis zu 20 % der bisherigen, schon eingeschrankten Produktion vorsah, auch noch bis zum 20. August 1932 durchgefuhrt wurde. Im Zusammenhang mit der Steigerung der Rohstoffpreise und einer etwas gunstigeren Beurteilung der allgemeinen Lage hat sich im Laufe des August die Nachfrage belebt, sodass am Schlusse des Quartals der vorhandene Auftragsbestand grosser war als am Schlusse des 1. und 2. Quartals 1932. Der Beschaftigungsgrad ist infolgedessen ebenfalls etwas gestiegen und betragt gegen Ende des Quartals etwa 70 % der vollen Kapazitat. Eine Besserung der Webmargen konnte leider nicht erzielt werden. Diese sind nach wie vor absolut unzulanglich und unbefriedigend.

(*Verein Suddeutscher Baumwollindustrieller e. V.*)

SPINNING SECTION

In the first few weeks of the third quarter of 1932 the economic position of the German cotton spinning industry was substantially unchanged from that of the preceding quarters, but in August, in consequence of the steady rise on the part of cotton prices, all sections of the trade experienced a quickening in the *tempo* of business. However, although there was an increase in the desire to purchase, calls on old contracts were not greatly in evidence.

The decline shown in the tendency of cotton prices at the commencement of September, and the sharp variations of price experienced, injected an element of uncertainty into the yarn business. However, in spite of this the flow of fresh orders continued. Calls on old contracts were even greater than in the previous months.

As from September 12, the organized curtailment of production, which had been introduced into the German cotton-spinning industry since July 1, 1932, was waived. The present degree of activity, however, has only increased slightly in spite of this fact, and can be taken as 65 to 70 per cent. of the full capacity of the industry at the end of the quarter under review.

The original report in German reads as follows:

In den ersten Wochen des 3. Quartals 1932 war die geschaftliche Lage der deutschen Baumwollspinnerei im wesentlichen gegenüber dem voraufgegangenen Quartal unverandert still. Erst im Laufe des Mts. August setzte als Folge der starken Steigerung der Rohbaumwoll-Notierungen in allen Sparten der Baumwollspinnerei eine markliche Belebung der Verkaufstatigkeit ein. Bei den Abschlussen handelte es sich jedoch vorwiegend um Meinungs — Käufe der Abnehmerschaft; eine Verstärkung des Abrufes auf alte Kontrakte war dagegen zunachst noch nicht zu bemerken.

Die mit Beginn des Mts. September eintretende rücklaufige Bewegung der Rohstoff-Notierungen, die mit starken Schwankungen verbunden war, trug zwar eine erhebliche Unsicherheit in das Garngeschaft, Trotzdem hielt aber der Neueingang an Auftragen im allgemeinen an. Der Abruf auf frühere Abschlüsse war sogar lebhafter als in den Monaten vorher.

Mit Wirkung vom 12. September wurde die organisierte Betriebseinschränkung, die in der gesamten deutschen Baumwollspinnerei vom 1. Juli 1932 ab durchgeführt war, vorlaufig unterbrochen. Der tatsächliche Beschäftigungsgrad hat sich aber trotzdem im allgemeinen nur unwesentlich gehoben, er kann gegen Ende des Berichts = Quartals mit etwa 65 bis 70 % der Voll-Kapazität angenommen werden.

(*Arbeitsausschuss der deutschen Baumwollspinnerverbände.*)

HOLLAND.

SPINNING SECTION.

Conditions in the spinning section have not improved during the last three months. Most of the mills are working short-time, as the demand for yarns remains unsatisfactory. Prices are very poor, both for coarse and medium counts, and most mills are working at a loss.

WEAVING SECTION.

The situation in the weaving section of the Dutch cotton industry is very poor generally. The large export mills are receiving very few orders, and have a great number of looms stopped. The demand from the home trade is far from good, and the competition in this market is so severe that the prices obtainable are very poor indeed. According to a recent enquiry, the number of workpeople employed by 75 cotton mills amounted to 27,612 on June 1, 1932, against 40,122 on June 1, 1929. The average working week in 1932 was 40½ hours, against 48 hours in 1929, and the amount of wages paid at present is about 20 million florins per year, against 41.3 million florins in 1929.

HUNGARY.

The situation of the Hungarian cotton industry is in the main unchanged. In consequence of the existing restriction regarding exchange, the maintenance of the industry is beset with many difficulties. The imports of finished goods have further declined, as is shown by the following statistics:—

IMPORTS—(quintals)	1931 January to July inclusive	1932 January to July inclusive
Raw cotton	68,600	87,098
Cotton yarn	11,197	12,737
Cotton piece goods and other cotton goods	12,064	5,663
EXPORTS—(quintals)		
Cotton yarn	2,189	32
Cotton piece goods	4,545	3,905

The following is the original text in German:—

Die Lage der ungarischen Baumwollindustrie ist im Allgemeinen unverandert. Infolge der bekannten Devisenschwierigkeiten ist auch die Aufrechterhaltung der Betriebe fortwahrend mit Schwierigkeiten verbunden. Der Import von Fertigwaren ist weiter zurückgegangen wie aus den folgenden statistischen Daten zu entnehmen ist:—

IMPORT—(quintals)	1931 I–VI (Jan.–July) inclusive)	1932 I–VI (Jan.-July) inclusive)
Rohbaumwolle (Raw cotton)	68,600	87,098
Baumwollgarne (Cotton yarn)	11,197	12,737
Baumwollgewebe und sonstige Baumwollwaren .. (Cotton piece goods and other cotton goods)	12,064	5,663
EXPORT—(quintals)		
Baumwollgarne (Cotton yarn)	2,189	32
Baumwollgewebe (Cotton piece goods	4,545	3,905

(*Magyar Textilgyarosok Orszagos Egyesulete, Budapest.*)

JAPAN.

Since the beginning of November last year the rate of curtailment of output observed by the Japan Cotton Spinners' Association (previously 25.6 per cent.) has been 30.8 per cent., but it is now announced that spindle activity will be reduced still more from the beginning of October, 1932. The percentage of curtailment from October to December will be 36.4.

SWEDEN.

The cotton industry is still suffering from the world crisis. Short-time working prevails with very few exceptions in most of the establishments. As far as the cotton industry goes, there are very few signs that the present crisis is passing.

No alterations have been made in the wages paid to spinners and weavers, as the agreement between the employers' association and the unions has been prolonged for another year.

(*Svenska Bomullsfabrikantföreningen.*)

SWITZERLAND

As hitherto the Swiss industry is labouring under the greatest of difficulties as regards exports, and extremely low prices are general. The orders on the books are by no means sufficient to keep fully occupied the small contingent of workers still employed. The short rise in the price of cotton at the commencement of September brought an increase of orders; nevertheless this rise was short lived, and before the end of the month prices were accepted which bore no relation to the decline in the price of the raw material. Although, on the one hand, a few employers have succeeded in providing orders for their production for two or three months ahead, yet, on the other hand, at the end of the period covered by this report, 40 per cent. of all factories were experiencing considerable curtailment notwithstanding the increased activity due to the earlier impulse on account of lower prices of raw material. About 25 per cent. of the cotton operatives are working part time.

Reductions in wages are hindered by political and trade union obstacles as well as by reductions in working hours, and slow progress is being made, only about 60 per cent. of the employed operatives being as yet affected. The withdrawal of operatives from the ranks of spinners and weavers proceeds relatively unhindered.

The original report in German follows:

Die schweizerische Baumwollindustrie leidet nach wie vor unter unüberwindlichen Exportschwierigkeiten und allseitig scharfem Preisdruck. Die zu Buch stehenden Aufträge reichen zu auch nur annähernd voller Beschäftigung der noch vorhandenen Belegschaft bei weitem nicht aus. Wohl brachte die kurze Baumwollhausse Anfang September auch vermehrte Orders, doch flaute diese Anregung schon vor Monatsende wieder ab, trotzdem Preise akzeptiert wurden, die dem Rohstoffaufschlag keine Rechnung trugen. Wenn es einerseits etlichen Betrieben gelungen ist, für ihre Arbeitskräfte zwei bis drei Monate reichende Beschäftigung zu sichern, so zeugt anderseits der Umstand, dass zu Ende der Berichtsperiode 40 Prozent aller Betriebe unter erheblicher Teilarbeitslosigkeit litten, von der beschränkten Auswirkung der kurzlebigen Nachfrage. Rund 25 Prozent der gesamten Baumwollarbeiterschaft sind z. Zt. noch teilarbeitslos.

Die Lohnsenkung, gehemmt durch gewerkschaftliche und politische Widerstände sowie Arbeitszeitreduktionen, macht nach wie vor sehr langsame Fortschritte und ist heute erst bei 60 Prozent der Belegschaft in vorwiegend bescheidenem Rahmen durchgeführt. Umso ungehemmter vollzieht sich die Ausscheidung von Arbeitskräften aus dem Produktionsprozess namentlich in Spinnerei and Zwirnerei.

IMPORT UND EXPORT IN DEN MONATEN JUNI, JULI UND AUGUST 1932

	Imports		Exports	
	Amount *Menge* quintals	Value *Wert* Fr	Amount *Menge* quintals	Value *Wert* Fr
Yarns (*Garne*)	3 339.06	1 529 961	5 529.30	2 385 409
Cloths (*Gewebe*)	4 978.87	4 223 051	5 298.04	6 722 651
Knit Goods (*Stickereien*)	23.60	94 274	1 936.24	4 382 780
Total	8 341.53	5 847 286	12 763.58	13 490 840

(*Schweizerischer Spinner, Zwirner und Weber Verein.*)

U.S.A.

Mill stocks of carded cotton cloths at the end of September amounted to less than three weeks of current production, according to the Association of Cotton Textile Merchants of New York, which early in October made public its statistical report of production, billings and sales for September, 1932. The figures cover a period of five weeks.

Stocks are down 23.5 per cent to 160,121,000 yards, which is a new low record. Shipments during the month were 334,242,000 yards or 117.3 per cent of production, which totalled 284,956,000 yards. The average weekly production was 56,991,000 yards. Sales for the month were 292,410,000 yards, or 102.6 per cent of production.

The yardage of unfilled orders was 444,028,000 yards, an increase over the production at the same date in the boom year of 1929, when the figure was 438,952,000 yards, although it should be noted that September of that year contained only four weeks instead of five, as in this year. Stocks then were 185,000,000 yards more than are now on hand.

The following statistics cover upwards of 300 classifications or constructions of carded cotton cloths, and represent the major portion of the production of these fabrics in the United States. The report represents yardage reported to the Association and the Cotton Textile Institute, Inc. It is a consolidation of the same 23 groups covered by reports since October, 1927. The figures for the month of September cover a period of five weeks:—

Production 284,956,000 yards
Sales 292,410,000 yards
Ratio of sales to production 102.6 per cent
Billings 334,242,000 yards
Ratio of billings to production 117.3 per cent
Stocks on hand September 1 209,407,000 yards
Stocks on hand September 30 160,121 yards
Change in stocks decrease 23.5 per cent
Unfilled orders September 1 485,860,000 yards
Unfilled orders September 30 444,028,000 yards
Change in unfilled orders decrease 8.6 per cent

PRODUCTION STATISTICS

(Recapitulation of monthly totals)*

	Production	Sales	Shipments	Stock at end	Unfilled orders at end
1928					
January	297,669	194,111	266,917	367,223	313,893
February .. .	300,323	256,328	285,404	382,142	284,817
March (5 weeks) . .	358,271	350,101	337,819	402,594	297,009
April	286,005	335,117	270,172	418,427	362,044
May (5 weeks)	349,325	269,815	326,344	441,508	305,615
June	287,818	267,025	270,342	458,084	302,328
July	221,826	187,439	217,540	463,270	272,227
August (5 weeks)	302,470	340,810	324,073	441,667	288,961
September	253,688	387,151	278,110	417,245	398,005
October	284,899	401,953	307,402	394,742	492,556
November (5 weeks)	341,841	375,163	347,949	388,634	519,770
December	279,207	225,189	276,098	391,713	468,861
1929					
January (5 weeks)	342,806	317,078	345,354	389,195	440,585
February	292,873	340,709	309,118	372,950	472,176
March	297,994	358,333	325,633	345,311	504,876
April	283,788	202,520	277,098	352,091	430,208
May (5 weeks)	341,370	278,335	326,121	367,340	382,512
June	285,928	228,244	252,008	401,260	358,718
July	234,439	262,889	252,779	382,920	368,858
August (5 weeks)	307,538	312,635	326,398	364,060	355,095
September	268,611	371,485	287,628	345,043	438,952
October	283,064	222,196	265,450	362,657	395,698
November (5 weeks)	345,146	222,911	276,377	431,426	342,282
December	243,735	302,934	214,148	461,013	431,018
1930					
January (5 weeks)	323,287	292,034	331,481	452,819	391,571
February	266,849	243,861	274,543	445,125	360,880
March	261,403	292,249	265,675	440,853	387,463
April	257,243	223,225	253,360	444,736	357,328
May (5 weeks)	275,801	184,473	270,056	450,481	271,745
June	198,539	129,947	182,652	466,368	219,040
July	165,850	180,147	176,689	455,529	222,498
August (5 weeks)	218,815	235,272	231,348	442,996	226,422
September	182,385	201,980	232,975	392,406	285,427
October (5 weeks)	228,866	335,801	270,383	350,889	350,845
November	206,033	183,067	200,661	356,861	333,251
December (5 weeks)	234,052	182,656	226,951	363,962	288,956
1931					
January	202,149	239,106	210,597	355,514	317,465
February	212,168	326,691	248,354	319,328	395,802
March (5 weeks)	271,638	295,334	317,185	273,781	373,951
April	225,955	137,749	217,582	282,154	294,118
May	225,392	160,029	205,603	301,943	248,544
June (5 weeks)	260,163	355,902	273,871	288,235	330,575
July	192,545	158,353	211,331	269,449	277,597
August	209,050	167,555	227,644	250,855	217,508
September (5 weeks)	272,118	287,708	278,049	244,924	227,167
October	227,116	333,679	216,207	255,833	344,639
November	231,446	224,207	213,889	273,390	354,957
December (5 weeks)	254,692	204,916	237,834	290,248	322,039
1932					
January	232,707	338,010	268,889	254,056	391,150
February	244,342	245,582	258,744	239,654	377,988
March (5 weeks)	285,252	165,850	265,675	259,231	278,163
April	205,089	102,307	162,104	302,216	218,366
May	183,717	145,756	170,485	315,448	193,637
June (5 weeks)	200,587	188,158	210,885	305,150	170,190
July	141,673	222,616	165,574	281,249	227,052
August	180,781	510,531	252,623	209,407	485,860
September (5 weeks)	284,956	292,410	334,242	160,121	444,028

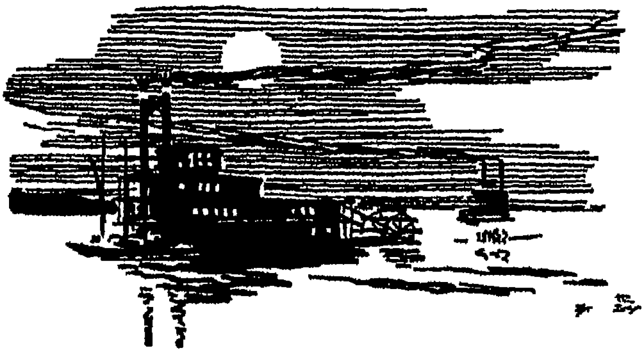
* 000's omitted.

U.S.S.R

According to reports published recently by the U S Department of Agriculture (Bureau of Agricultural Economics), the July production plan in Russia was reported fully executed in the case of cotton fabrics with total production amounting to 198,000,000 yards (100 2 per cent of the plan) Yarn output continued somewhat below plans with 47,900,000 lbs , or 95 8 per cent of the plan, turned out during the month

August production figures will probably be smaller than those of July because of the summer vacation taken by the workers Preliminary figures available for the first twenty days of the month indicate a total output of finished fabrics of only 90,900,000 yards and 27,300,000 lbs of yarn

Total production of cotton fabrics during the first half of the year amounted to 1,375,000 000 yds , or 46 5 per cent of the yearly plan Compared with the corresponding period in 1931, production increased by about 12 per cent , but a further increase is necessary if the total plan for 1932 of 3,348,000,000 yards is to be executed A lag as compared with the plan is also noticeable in the case of cotton yarn production, which amounted to 364,813,000 lbs during the six months ended June 30, or also 46 5 per cent of the yearly plan



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COTTON GROWING

ALGERIA

A report, dated September 15, in the Bulletin of the Association Cotonnière Coloniale, states that —

"By reason of the low prices for cotton and the depredations of the pink boll worm, the cultivation of cotton in Algeria is tending to decrease.

During the present year only about 250 hectars, as against 1 200 hectars in 1931, are under cultivation. Latterly however the pink boll worm does not appear to have done as much damage as earlier in the year, but it will be necessary to wait until the end of October before it will be possible to estimate the yield per acre, which is at present put at 8 quintals of seed cotton per hectar.

Weather conditions have been extremely favourable for the crops cultivated, and the stands of the cotton plant are perfect. Shortage of water has not been noticeable except in the districts of Sig and Perregaux. The Government has decided to send a representative of the Agricultural Service to Egypt in order to study the method employed against the pink boll worm in that country."

BRAZIL

THE GOVERNMENT COTTON SERVICE

The Superintendent of the Cotton Service has presented to the Minister of Agriculture the Report of the work done during the year 1931, in the introduction to which he states that many improvements have been introduced.

A new system has been organized in connection with experimental work carried on at all the experimental stations and in some of the seed farms in the States of Maranhão, Ceara, Rio Grande do Norte, Parahyba, Pernambuco, Alagôas, Sergipe, Bahia, Rio de Janeiro, Minas Geraes and São Paulo, which now, for the first time, is in accordance with the system adopted at the English station at Rothamsted.

The work of the fibres laboratory has been regularly carried on.

The classification services have been incorporated in the Ministry of Agriculture, and the commissions which operated in the States under the respective Governments and Associations have been subordinated to the Federal Government, which alone issues certificates of inspection of products exported.

The total quantity of raw cotton classified by the Ministry of Agriculture amounted to 88,268,933 kilos, as compared with 67,245,170 kilos in the previous year, and a notable improvement was observed in the quality of the 1931 crop.

The experimental stations, seed farms and co-operative camps produced during the year a total of 374,156 kilos, as compared with 295,022 kilos in 1930. There was an increase of 100 hectares in the area under cultivation in these establishments, from 1,054 hectares in 1930 to 1,154 hectares in 1931 (a hectare is approximately equivalent to two and a half acres). Among these the first place was taken by the seed farm of Uberlandia, in the State of Minas Gereas, where the production amounted to 31,750 kilos.

The distribution of seeds was somewhat less than in the previous year, and amounted to 148,667 kilos.

The production during the year 1931 totalled 102,153 metric tons, of which 20,778 tons were exported abroad.

The revenue of the Service reached the sum of Rs.553:485$268 during the year, which was a considerable advance on the amount of Rs.85:770$879 for the previous year.

The report points out that there are vast areas in the country, particularly in the north-east region, that might be covered with cotton.

The *Superintendencia do Serviço do Algodão* of the Ministerio da Agricultura, Rio de Janeiro, published the following final cotton crop report for Brazil:—

COTTON SEASON 1931-32—PRODUCTION OF RAW COTTON BY STATES

No.	State	Production 1930–31 kgs.	Production 1931–32 kgs.	Increase or Decrease kgs.	Bales of 478 lbs. 1930 31	1931 32
1	Amazonas ..	—	20,000	+ 20,000	--	92
2	Pará	3,510,000	2,001,000	— 1,509,000	16,155	9,209
3	Maranhão ..	12,213,000	13,830,000	+ 1,617,000	56,210	63,653
4	Piauhy	1,676,000	1,897,000	+ 221,000	7,718	8,731
5	Ceará	14,000,000	14,000,000	--	64,435	64,435
6	R. G. do Norte ..	10,000,000	14,281,000	+ 4,281,000	46,025	65,728
7	Parahyba ..	18,000,000	23,000,000	+ 5,000,000	82,815	105,858
8	Pernambuco ..	13,000,000	15,000,000	+ 2,000,000	50,833	60,038
9	Alagôas	4,418,000	6,600,000	+ 2,182,000	20,331	30,377
10	Sergipe	3,750,000	4,125,000	+ 375,000	17,259	18,985
11	Bahia	3,500,000	2,600,000	— 900,000	16,109	11,967
12	Rio de Janeiro ..	1,936,000	1,936,000		8,910	8,910
13	São Paulo ..	11,000,000	16,000,000	+ 5,000,000	50,628	73,640
14	Minas Geraes ..	5,000,000	5,500,000	+ 500,000	23,013	25,311
15	Goyaz	150,000	—	— 150,000	690	-
		102,153,000	120,790,000	+18,637,000	470,161	555,937

Rio de Janeiro, July 30, 1932.

Under the new organization of the Classification Section of the Cotton Service of the Ministry of Agriculture, all cotton exported is submitted to rigorous classification, the officials being present when the cotton is being pressed and the bales prepared for export, and issuing the necessary official certificates.

The cotton inspected during 1931 was classified according to the following types and lengths of fibre:—

	per cent.
Type 1 (strict good middlings)	5·0
„ 2 (good middling)	4·0
„ 3 (middling)	18·0
„ 4 (strict low middling)	23·0
„ 5 (low middling)	21·0
„ 6 (low middling)	12·0
„ 7 (strict good ordinary)	8·0
„ 8 (good ordinary)	4·0
„ 9 (good ordinary)	5·0
Linters (below type 9)	4·0
Up to 20 millimetres	0·5
„ 22 „	3·0
„ 24 „	10·0
„ 26 „	14·0
„ 28 „	20·0
„ 30 „	17·0
„ 32 „	12·0
„ 34 „	14·0
„ 36 „	8·0
„ 38 „	—
Mixed	1·5

It is calculated that the areas suitable for cotton cultivation in the principal cotton-growing states amounts to 81,923,000 hectares, which is about equal to one-third of their total areas, and is distributed as follows:—

	hectares
Maranhão	11,345,000
Piauhy	7,706,000
Ceará	5,255,000
R.G. do Norte	1,876,000
Parahyba	1,741,000
Pernambuco	3,175,000
Alagôas	1,016,000
Sergipe	720,000
Bahia	19,583,000
São Paulo	8,333,000
Minas Geraes	20,264,000

In addition to the above, cotton growing on a smaller scale is carried on in the states of Pará, Goyaz, Matto Grosso, Rio de Janeiro and Espirito Santo.

BULGARIA.

On an area of 30,000 acres, representing 226.5 per cent. of that of last year and 244.7 per cent. of the average of 1926-30 production is forecast at 53,000 centals (11,100 bales) of ginned cotton. This production is 225.6 per cent. of that of 1931 and 327.3 per cent. of the five-year average.

(*International Institute of Agriculture.*)

CHINA.

The 1932-33 Chinese cotton crop has been forecast at 3,021,000 bales of 478 lbs., compared with their revised estimate of 1,785,000 bales for 1931-32, which would mean an increase of 69 per cent., according to the first estimate of the Chinese Millowners' Association. It is thought that the forecasted production is too large even for the area considered, which includes additional areas not included in former years. In an effort to make the production data for these years more comparable with those for previous years, it is felt that a figure of 2,500,000 bales for 1932-33 is sufficiently large, and that about 1,700,000 bales should be used for the 1931-32 production. A production of 2.5 million bales this season would represent an increase of 47 per cent. over the revised figure for last season, 11 per cent. greater than the 1930-31 production, and the largest since about 1919-20. The short crop last season was largely a result of the flood, so that this year with only average yields a large increase would be expected. Reports, however, indicate that growing conditions this season have evidently been better than usual. The millowners' estimated acreage for 1932-33 is 5,630,000 acres. To make this comparable with ~~previous~~ years, however, it has been reduced to 5,300,000 acres, ~~which is 10 per~~ cent. greater than the 4,800,000 acres being used for the 1931-32 area in U.S. Bureau publications, and only about 1 per cent. greater than the 1930-31 acreage.

(*Foreign Crop and Markets.*)

PRELIMINARY ESTIMATE OF 1932 COTTON CROP.

Based on reports from the 11 provinces of Hopei, Shantung, Shansi, Honan, Shensi, Hupeh, Hunan, Kiangsi, Anhwei, Kiangsu and Chekiang, the China Cotton Statistics Association has published a preliminary estimate of this year's cotton crop in the above-mentioned provinces. The statement reveals that the total area of cotton-fields in these provinces is 37,086,776 mow, while the estimated crop is 10,829,162 piculs. The following table shows the planted area and yield of raw cotton for the past 13 years:—

	Area Mow	Yield Piculs
1919	33,037,881	9,028,390
1920	28,327,297	6,750,403
1921	28,216,168	5,429,220
1922	33,464,595	8,310,355
1923	29,554,053	7,144,642
1924	28,771,577	7,808,882
1925	28,121,027	7,534,351
1926	27,340,727	6,243,585
1927	27,610,276	6,722,108
1928	31,926,311	8,839,274
1929	33,811,255	7,587,021
1930	37,593,012	8,809,567
1931 (preliminary estimate	35,468,352	6,793,241
1931 (secondary estimate)	34,182,747	6,400,641
1931 (final estimate)	31,637,779	6,399,780
1932 (preliminary estimate)	37,086,775	10,829,162

From the above table this year's cotton crop appears certain to be much better than that of last year. In 1931 only the crop in the northern provinces was comparatively good, while the picking in Kiangsu and Hupeh, the two most important cotton-producing provinces in the Yangtze Valley, was unprecedentedly poor. The improved crop this year is chiefly attributable to better weather conditions, especially in the northern provinces. In recent years a dry spell in the north has greatly hindered the growth of the cotton plants, but this year, except in a few places, there was an excess of rain in Honan, Hopei and Shantung. In some parts the cotton-fields were inundated, but, fortunately, the majority sustained no serious damage. The average output per mow in these northern provinces, both for American and indigenous varieties, was over 100 catties. Therefore, taken as a whole, this year's crop in all the northern provinces, with the sole exception of Shensi, which suffered from insufficient rain (only one fall during the year) and damage done by hail, is much better than that of 1931.

In the southern provinces cotton suffered from excessive rainfall in 1931, but this year similar damage was done by a dry spell. In 1931 Kiangsu's crop was less than 10 catties per mow, and in Hupeh over 4,000,000 mow of cotton-fields were completely inundated. Generally speaking, this year's crop in the southern provinces, in spite of insufficient rain, is expected to be better than that of last year. Detailed figures of area and production for each province, with a comparison with last year's estimate, follow:—

	1932 (Preliminary Estimate)		1931 (Final Estimate)	
	Area Mow	Output Piculs	Area Mow	Output Piculs
Liaoning		—	1,142,430	177,680
Hopei . . .	4,954,645	1,560,464	2,953,000	844,000
Shantung	7,300,236	2,649,257	7,974,094	2,154,882
Shansi	343,784	81,118	348,877	81,728
Honan	3,174,830	892,802	2,880,410	644,544
Shensi	1,829,553	182,183	1,638,800	346,319
Hupeh	7,568,210	2,706,610	4,284,260	1,037,002
Hunan	1,057,570	325,520	266,450	45,292
Kiangsi	215,928	62,376	46,127	8,920
Anhwei	529,490	159,013	462,900	43,050
Kiangsu	8,504,829	1,716,731	7,656,244	626,480
Chekiang	1,607,700	493,058	1,984,187	389,883
Total	37,086,775	10,829,162	31,637,779	6,399,780

COLOMBIA.

The cotton crop of 1931 is estimated by the Department of Agriculture of Colombia at about 13,000 to 14,000 equivalent bales of 500 lbs. each, which is a decided increase over the estimated production of 1930 of about 7,000 to 8,000 bales. It is believed by officials of the local authorities that the 1932 crop will exceed that of 1931.

Cotton imports in 1931 aggregated 4,110 equivalent bales of 500 lbs., of which about 3,900 bales were American cotton, the received from France, Great Britain and Italy.

(*U.S. Department of Commerce.*)

CYPRUS.

At the middle of September picking was well advanced and a good crop was being harvested, but, owing to the restricted area, production this season will be below the average. (*I. I. A.*)

ECUADOR

The cotton crop of 1932 is estimated by local officials at about 5,500,000 lbs. of seed cotton, equivalent to about 3,000 bales of 500 lbs. The 1932-33 cotton crop will be much smaller, owing to the damage from excessive rains in June and July, according to local growers.

The imports of cotton during the 12 months ending July, 1932, aggregated 534,000 lbs., practically all from the United States. The exports of cotton during the 12 months amounted to 70,000 lbs. (*U. S. D. C.*)

PORTUGUESE AFRICA

Cotton exports from Mozambique in 1931 amounted to 6,530 equivalent 500-lb. bales, of which 730 bales were shipped to Portugal.

The exports of cotton from Angola during 1931 totalled 2,816 equivalent 500 lb. bales, and exports from January to June, 1932, were 854 bales. All the cotton exported from Angola is shipped to Portugal. (*U. S. D. C.*)

FRENCH INDO-CHINA

The crop has on the whole been somewhat deficient in Cambodia owing to the drought. (*I. I. A.*)

FRENCH EQUATORIAL AFRICA.

According to an official source, production of ginned cotton is estimated at 44,000 centals (compared with 26,500 last year) from 76,000 centals (15,800 bales) of raw cotton.

In 1930-31 the cotton area was nearly 50,000 acres. (*I. I. A.*)

GREECE.

The latest estimate of production of raw cotton in 1931 shows a decrease of 11,000 centals (2,300 bales) compared with the preceding estimate. Production of ginned cotton is estimated at 58,000 centals (12,000 bales) against the previous estimate of 61,000 (13,000) compared with 1931 (77,000 centals, 16,000 bales) and the average of 1925-29 (72,000, 15,000) there are decreases of 25.3 per cent. and 19.7 per cent. respectively in the production of ginned cotton. (*I. I. A.*)

MEXICO.

Production of lint in 1932-33 is estimated at 416,000 centals (87,000 bales) against 989,000 (207,000) in 1931-32, and 1,186,000 (248,000) on the average of the five years ending 1930-31, percentages, 42 and 35. This very considerable decrease is due particularly to the heavy fall in area consequent on low prices and unfavourable weather. (*I. I. A.*)

QUEENSLAND

The cotton growing districts of Queensland have suffered severely from the cold, dry weather of late, and the continuance of the drought conditions which have prevailed since the beginning of the year The prospects of the cotton industry are indeed alarming, and unless good soaking rains occur before the end of October disaster is inevitable If the rains come during the next two months prospects will improve, and the situation may be retrieved In the Central district, particularly in the Callide Valley, which is the most important cotton area in the State, conditions generally are appalling, and growers are at the end of their resources The rainfall at Biloela since January 1 has amounted to only 618 points, and this meagre precipitation, following a droughty-season in 1931, means that the subsoil is bone dry Not a blade of grass is to be seen, and all livestock have been removed to better areas No cotton has been planted, as the dry, hard soil has made ploughing and the preparation of cotton land impossible The 1932 cotton season was practically a failure in all cotton growing districts except the Theodore irrigation area, which wa the one bright spot in cotton production for 1932 In spite of some flooding last December, cotton crops this year have returned high yields—double those in non irrigated areas But the blocks are far too small, a fatal error of judgment which has ruined the prospects of settlers From 40 to 60 acres of irrigated land are required by each settler for general farming, and cotton would be the principal crop To establish economic land settlement in Queensland the construction of irrigation works for the production of cotton for Australian consumption is put forward as a project which would absorb a great many of our unemployed, and permanently settle men on the land by stabilizing an agricultural industry on a profitable level The development of an Australian cotton textile industry, manufacturing 70 per cent of our requirements of cotton goods, would create a demand for 160,000 bales of cotton lint To produce this amount of cotton under irrigation 200,000 acres would have to be laid down under the crop, and if the irrigated farms were each 50 acres in extent, half of which would be planted with cotton annually, the total scheme would mean 8,000 farms and 400,000 acres brought under irrigation The bounty on cotton yarns will be removed after the end of the financial year, but this will not affect cotton growers The estimated payment of the bounty for the present year will be about £120,000, which sum will now be saved by the Treasury, and if cotton-growing develops, as we hope, the saving will be much larger The change will mean that the added cost of cotton spinning will pass from the general taxpayer to the wearers of clothes made from Australian cotton yarn When the present Government took office the total protection was a flat duty on yarn of 6d per lb , plus an *ad valorem* duty of 35 per cent and a bounty of 4½d The 6d duty has been abolished and the bounty taken away, representing specific assistance of 10½d , so that there is now a total assistance of 5d The spinners are satisfied with the new position, and the Queensland Cotton Board has assured Mr Gullett, Minister for Trade and Customs, that growers are content Cotton-growing is going to be one of Queensland's biggest primary industries before long

("*Textile Journal of Australia*")

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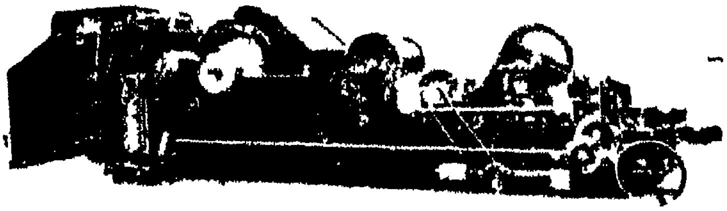

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ST. VINCENT, WINDWARD ISLANDS.

The Sea Island cotton season terminated on May 1 No cotton will be planted before September 1 Insect and fungus pests in the past season were normal The 1931-32 crop is estimated at about 206,200 lbs , at the rate of 114 lbs per acre
(I I A)

SPAIN.

The unfavourable weather conditions at the time of germination have made necessary the abandonment of part of the areas sown to cotton

Production of lint this year is estimated at 18 600 centals (3,900 bales), representing an increase of 17 7 per cent on that of last year 15,800 centals (3,300 bales), and a decrease of 9 2 per cent on the average of the five years ending 1930 31 20,500 centals (4,300 bales) (I I A)

SUDAN.

According to the last official report from Khartum, total production in 1931-32 is 986,000 centals (206 000 bales) ginned cotton, 107 5 per cent more than that of last season, which was 475,000 centals (99,500 bales) and 64 7 per cent more than the average of the five years ending 1929 30, which was 599,000 centals (125,300 bales) The area under Sakellardis is 1931-32 is 263,000 acres against 309,000 in 1930-31, and the five-year average of 199,000, 85 1 per cent and 131 8 per cent The corresponding figures for production of Sakellaridis are 897,000 centals (188,000 bales), 395,000 (83,000) and 522,000 (109,000), 227 7 per cent and 171 7 per cent

The quantity of ginned cotton picked up to the end of May, 1932, was 984,000 centals (206 000 bales), against 508,000 (106,000) in 1931, 660,000 (138,000) in 1930, 677,000 (142,000) in 1929 and 524,000 (110 000) in 1928 (I I A)

The report issued by the Department of Agriculture and Forests of the Sudan Government in July, the final cotton report, is as under —

Variety	Area under crop Feddans	Picked to date Kantars of 315 Rottles	Estimated total yield 315 Rottles
Gezira Sakel (Syndicate)	171 788	705 686	805 051
(K C C)	19 191	99 365	
Tokar Sakel	38 000	52 614	52 614
Kassala Sakel	17 500	30 614	30 614
Dueim Sakel	375	1 792	1 792
Private Estates Sakel	3 216	13 721	13 721*
Total Sakel	253 070	903 792	903 792
Irrigated American	10 653	43 670	43 670
Rain grown American	59 810	46 640	46 640

* Amended

Exports of raw cotton during the first six months of 1932 from

22-719/41.

the Anglo-Egyptian Sudan reached 121 308 bales of 478 lbs against 25 047 bales for the same period of 1931. Of this 104 205 bales were of the Sakellaridis variety produced in Gezira, Tokar and Kassala districts, 16 901 bales were American cotton from irrigated and rain grown areas and 202 bales were Scarto which is Sakellaridis. It is said the increased shipments of raw cotton from the Sudan indicates that it is the policy of both the Government and the Sudan Plantation Syndicate to move their cotton from Port Sudan as rapidly as possible. Of the total exports of the Sudan during the first half of this year 16 per cent went to India. Great Britain received the bulk of the Sudan exports or practically two thirds of the total.

SYRIA AND LEBANON

The area planted to cotton in the territory of the Government of Latakia has been reduced to 7 400 acres compared with 13 600 in 1931, and the land released has been devoted to market garden crops. The area in the State of Syria is not yet known.
(I. I. A.)

TANGANYIKA

Towards the end of July picking of early cotton was commenced in many districts. The Department of Agriculture sounded a note of warning on the desirability of early harvesting of cotton particularly in the Eastern Province where there was some prospect of light showers which would have slightly affected lustre. Crop prospects were generally satisfactory except for late plantings in the Lake Victoria area. (I. I. A.)

TURKEY.

According to information received by the Mersina Chamber of Commerce, the production in that province, which supplies about 30 per cent. of the total crop, appears to be larger than last year. The recent rains were very favourable. A production of over 350,000 centals raw cotton against 320 000 in the preceding season is expected. (I. I. A.)

UGANDA

Conditions generally over a large part of the cotton belt in July were favourable for planting and the total acreage planted to the end of July amounted to approximately 640 000 acres as against 570 000 acres at the same stage last year (112 per cent.). A mistake occurred in the previous report concerning the 1931-32 cotton production in Uganda. The correct figures are as follows:

	1931-32	1930-31	1925-26 to 1929-30	1930-31 = 100	Average = 100
Area (acres)	866 000	740 000	615 000	117.0	140.7
Production of ginned cotton					
Centals	780 000	756 000	620 000	103.2	125.8
American bales	163 000	158 000	130 000		

With the exception of the Northern Province and the northern areas of Teso district, dry conditions prevailed during the first three weeks of August over the greater part of the cotton areas. Whilst this interfered with planting to some extent, it is considered that the general effect on the earlier sowings will have been good in that normal root development will have been encouraged. In general, it can be stated that the condition of the crop is about normal. *(I. I. A.)*

UNION OF SOUTH AFRICA.

On the basis of seed cotton production, the production of lint is now estimated at 12,000 centals (2,700 bales), 40.9 per cent. of 1930-31, which was 31,800 (6,700) and 30.1 per cent. of the mean for the five years ending 1929-30, 43,200 (9,050). Owing to the low price, however, only the better grades can be ginned, and the actual production will no doubt be considerably lower than the figures of seed cotton indicate.

The poor crop this season is due to unremunerative prices, which brought about a wholesale reduction in the area planted, and to unfavourable weather.

A later report states: Production of ginned cotton in 1931-32 is estimated at 13,300 centals (2,780 bales) against 32,490 (6,800) in 1930-31 and 43,240 (9,050), the average of the five years ending 1929-30, decreases of 59 per cent. and 69 per cent. respectively. *(I. I. A.)*

U.S.S.R.

The cotton crop in Turkmenia, one of the principal cotton districts in Russia, is reported to be excellent, and harvesting began earlier than usual.

The yield is very favourable, as it is expected to be as high as 13 metric centners per hectare instead of the forecast of 9 centners per hectare.

Fully 1,249,000 metric tons of lint are expected from the Middle Asia cotton belt.

According to the U. S. Bureau of Agricultural Economics, the outlook for this year's cotton crop in Russia is still very uncertain. Although favourable crop prospects, even an increase over last year's crop, are indicated for certain regions, notably the Kokand region of Usbekistan, an important cotton section.

Recent reports indicate that this year's cotton acreage is probably below the 5,800,000 acres of the preliminary estimate, chiefly due to failure to complete the plan in Middle Asia and Transcaucasus, and also to some loss of acreage as a result of the lack of cultivation. (124,000 acres are reported to have been lost in Ukraine, or about 25 per cent. of the total cotton acreage there, of which fully 100,000 acres were left uncultivated after the planting and suffocated from the weeds.) It appears that the rather favourable outlook earlier in the season, as a result of timelier sowings than last year and favourable weather conditions, has been considerably blighted by poor cultivation during the important growing period. Poor irrigation of fields frequently had an unfavourable influence on the cotton plant, as fields were reported to have received twice and three times the water needed; at the same time the cultivation of the fields did not take place promptly, which led to drying up of the soil, formation of a crust and unusual growth of weeds. It is also stated that the reduction of the share of alfalfa in the general crop rotation system from 32 per cent. in 1914 to 17 or 18 per cent. at present, is resulting in exhaustion of the soil. This exhaustion is furthermore accentuated by insufficient use of fertilizers, only 6.4 per cent. of the acreage having been fertilized this year. A large part of the decrease in yields, however, are no doubt due to the expansion of the acreage into new and unirrigated regions. The latest available official Russian cotton figures give the following data for acreage, production and yield during the past few years:—

	Acreage in 1,000 acres	Production 1,000 bales of 478 lbs. net	Yield per acre lbs.
1927	1,851	994	257
1928	2,400	1,174	234
1929	2,608	1,279	234
1930	3,911	1,580	194
1931	5,346	1,851	166
1932*	5,400	‡1,900-2,000	
1932†	5,800		

* This Bureau's preliminary estimate.

† Official as of July 1, 1932. Later press reports indicate the possibility of a lower acreage.

‡ The estimated production on these two acreage figures using the formula given in the November, 1931, issue of World Cotton Prospects.

Sowings of the cotton were practically terminated on June 5, 5,802,000 acres, 95.5 per cent. of the Government plan, having been sown, against 5,281,000 last year. (*I. I. A.*)

WORLD PRODUCTION.

A statement recently issued by the *New York Cotton Exchange Service* estimates the probable world's cotton production for the current season at about 21,700,000 bales. This statement is based on incomplete and preliminary estimates, and is therefore subject to alteration.

This compares with 26,294,000 bales produced last season and a maximum of 27,804,000 produced in 1926-27.

"This would be the smallest world crop in nine years, or since 1923-24," says the Exchange Service. "However, the world carry-over of all kinds of cotton at the beginning of this season was by far the largest on record, and about 3,300,000 bales larger than that last year. This year's carry-over was 17,295,000 bales, against 13,948,000 last year. The total supply this season, consisting of carry-over plus crop, is thus about 38,995,000 bales, compared with 40,242,000 last season, making this season's supply about 1,247,000 bales less than that of last season."

New Cotton Organizations Formed in China.

By I M CHANG, Secretary of Chinese Cotton Mill Owners' Association

The task of investigating the Chinese cotton crop, and of issuing estimates on it based upon reports received from special reporters sent out to various provinces for that purpose, had been undertaken by the Chinese Cotton Millowners' Association, Shanghai, for ten years previous to 1931, when the Association, proposed to the cotton experimental stations and other cotton organizations in twelve cotton-producing provinces that a national conference be held in Shanghai to discuss means of improving the methods of making investigations and other questions in connection with the Chinese cotton crop

This proposal was promptly and unanimously agreed to by the various bodies concerned The 15th March, 1931, saw the inauguration of a special conference at the Chinese Cotton Goods Exchange Building, Shanghai It was the first gathering of this kind in the history of China It was also attended by the delegates specially appointed by the Ministry of Industry and Commerce, Nanking, and by the Agricultural Bureaux of the different provinces After seven days' discussion, the conference resulted in the formation of two associations the Chinese Cotton Improvement Association and the Chinese Cotton Statistics Association

As indicated by its name, the Cotton Improvement Association, whose members are drawn from agricultural colleges, cotton experimental stations, and other organizations specially interested in the cotton-growing industry, is to devote its energy to producing better cotton seed, and to extending the cotton area and improving cotton qualities It is hoped that the plan which it is now adopting will yield satisfactory results

The other new organization—the Chinese Cotton Statistics Association—is formed with the Statistics Department of the Chinese Cotton Millowners' Association as its nucleus, and with the co-operation of experimental stations and other bodies from the twelve provinces where cotton is grown It was decided that, commencing with the 1931 season, two estimates were to be issued, the first to be published on August 20 and the second on December 15, while a revised estimate was to be given on March 20, 1932

The following shows the estimates published by the newly-formed Statistics Association regarding the cotton area and production:—

		Area (mow)* d.s	Production (picul)*
1931	1st estimate	35,468,352	6,793,241
	2nd estimate	31,182,747	6,160,611
	Revised estimate	31,637,779	6,399,780
1932	1st estimate	37,086,775	10,829,162

It was found after the publication of the second estimate of last year's crop that much cotton land in the Yangtsze Valley damaged by the flood and abandoned had to be deducted from the previous cotton-acreage figures; thus the revised estimate shows a great decrease in area as compared with the previous two estimates.

The figures of area and production in individual provinces are given below:—

Province	1932 (1st estimate) Area (mow)	1932 (1st estimate) Yield (piculs)	1931 (Revised estimate) Area (mow)	1931 (Revised estimate) Yield (piculs)
Hopeh	4,054,645	1,560,461	2,953,000	814,000
Shantung	7,300,236	2,649,257	7,974,094	2,154,882
Shansi	343,784	81,118	348,877	81,728
Honan	3,174,830	892,802	2,880,410	614,544
Shensi	1,829,553	182,183	1,638,800	346,319
Hupeh	7,568,210	2,706,640	4,284,260	1,037,002
Hunan	1,057,570	325,520	266,450	45,292
Kiangsi	215,928	62,376	46,127	8,920
Anhwei	529,490	159,015	462,900	43,050
Kiangsu	8,504,829	1,716,731	7,656,244	626,480
Chekiang	1,607,700	493,058	1,984,187	389,883
Liaoning	—	—	1,142,430	177,680
Total	37,086,775	10,829,162	31,637,779	6,399,780

Owing to the trouble in Manchuria, it has been found impossible this season to investigate the cotton-crop condition in the province of Liaoning.

The following shows the figures for area and production for the last thirteen years:—

	Area (mow)	Yield (piculs)
1919	33,037,881	9,028,390
1920	28,327,207	6,750,403
1921	28,216,108	5,429,220
1922	33,464,595	8,310,355
1923	29,554,053	7,144,642
1924	28,771,577	7,808,882
1925	28,121,027	7,534,351
1926	27,349,727	6,243,585
1927	27,610,276	6,722,108
1928	31,926,311	8,839,274
1929	33,811,255	7,587,021
1930	37,593,012	8,809,567
1931	31,637,779	6,399,780
1932 (1st estimate)	37,086,775	10,829,162

* 1 Acre = 6·58644 mow. 133⅓ lbs. = 1 picul.

(*Chinese Cotton Millowners' Association, Shanghai.*)

The Cotton Situation in Soviet Russia.

The following Report was prepared by Mr. A. P. DEMIDOV, Member of Munds, Winslow & Potter, New York.

AT present, Soviet cotton production is concentrated in Central Asia, Transcaucasia, and the southern part of European Russia. Central Asia is a large territory between the western part of China and the Caspian Sea, where now many small native republics exist: Uzbekistan, Turkmenistan, Tadjikistan, Kazakstan, and the autonomous regions of Kirghiz and Kara-Kalpak.

Transcaucasia is the southern part of Caucasus which is situated between the Black and Caspian Seas. The following republics are there: Azerbaidjan, Georgia, and Armenia, and several other small political units which need not be mentioned.

New regions of cotton production include the southern part of Ukraine and Russia itself, Crimea, Daghestan, North Caucasus, and the region of the lower part of the River Volga which were never used before as real cotton production areas.

Efficient cotton production in Russia depends absolutely upon the irrigated lands in Central Asia and Transcaucasia, and practically excludes all the new regions where it is now attempted to produce cotton under natural conditions.

PRODUCTION

Cotton production in Soviet Russia showed rapid progress during the period of 1929-1931 as a result of the extraordinary efforts of the Government to make the country independent as far as foreign cotton is concerned. The following table shows the actual and the planned crops (according to the Five-Year Plan):—

CROPS IN THOUSANDS OF BALES (478LBS.)

	Actual	Planned
1915-1916	1,520	—
1929-1930	1,217	1,865
1930-1931	1,589	2,300
1931-1932	1,900*	2,978
1932-1933	—	3,747

* Preliminary.

The Soviet cotton production in 1930-1931 surpassed the crop of 1915—1,520,000 bales—and was the largest in the history of Russian cotton culture. I leave out of consideration the crop of 1931, because the figures for this year are preliminary. Nevertheless, it will be noted that the actual production is much below the planned output.

In fact, it will be noted that in these various years where production was planned, the yield in each season has fallen substantially below the ambitious programme. In 1929, the crop actually represented only 65 per cent. of the project. In 1930 it reached 69 per cent., and in 1931 the preliminary figures indicated that only 64 per cent. of the planned output was attained.

ACREAGE.

The following is the trend of acreage:—

ACREAGE IN THOUSANDS OF ACRES

	Actual	Planned
1915–1916	2,046	-
1930–1931	3,911	4,031
1931–1932	5,281*	4,914
1932–1933	5,802†	5,993

* Not previously revised

† Preliminary.

The actual acreage in 1930 was less than planned by 3 per cent. The season of 1931-1932 showed an increase of about 6 per cent. The preliminary figures of the sowing for 1932-1933 are lower than planned. The actual acreage of many seasons will be much lower because we know from past experience that the final figures are always from 10 to 20 per cent. lower than the preliminary ones. According to Soviet sources this year is exceptionally unfavourable for agricultural activity. The same condition is noted for cotton growing.

The Soviet cotton experience shows that the acreage does not play an important role in the final result of the crops. The acreage of 1930 amounted to 3,911,000 acres, and was 1.9 times larger than in 1915, but the crop remained about the same. A sudden increase in acreage without considerable influence on crops is a commonplace in the Soviet cotton industry.

YIELD PER ACRE.

The explanation for this phenomenon is found in the trend of the yield per acre, which was as follows:—

AVERAGE YIELD PER ACRE IN LBS OF LINT

1915–1916	357
1928–1929	228
1929–1930	223
1930–1931	168
1931–1932	172*

* Preliminary.

The above figures on yield per acre are extremely interesting. It will be noted that in spite of all the efforts of the present regime to develop productive efficiency, the yield per acre is materially below that attained under the individualistic Czarist regime, when probably no one credited the Russian peasant with any particular agricultural skill. In spite of all efforts to increase output, the yield per acre has fallen substantially below pre-war days.

In 1930 the yield per acre was only 47 per cent. of that of 1915, and was only about half of the average for many years in pre-war times. In fact, the contrary movement of the acreage and the yield per acre are striking characteristics of the cotton growing industry under Soviet administration. There are several causes for this tendency. In the first place, due to the sharp increase in acreage without any substantial progress in irrigation development, cotton culture has spread into lands with a lower productive capacity.

Moreover, as a result of the Revolution and further economic changes, the productive capacity of labour and capital in agriculture has declined considerably. All the agriculture of Russia is socialized by severe administrative measures, and private property in land has been abolished by the so-called collective and ‘Soviet economies” (which are generally known in brief as ‘Colkhoz” and ‘Sovkhoz”).

The ‘Colkhoz’ is collectivated economy where all the peasants are forcibly united in their economic activity and put under the closest administrative supervision and direction. The ‘Sovkhoz” is the agricultural factory which as a property belongs to the Government and where all the peasants are working as the simple labourers. Due to this condition, there is no place for private property and initiative, and it is impossible to expect normal effectiveness of agricultural activity.

Caution should be exercised in accepting the preliminary acreage estimates on the area planted to cotton in Soviet Russia. These early statistics hardly reflect the actual situation because the local republics and the local national cotton growing organizations have an inclination to estimate a larger acreage than actual in order to get maximum economic and financial assistance from the Central Government. The final figures are approximately accurate, and these are the ones that have been employed above in calculating the yield per acre.

IRRIGATION

The official irrigated area in Central Asia in pre-war times was equal to 13,335,000 acres. At that time from 70 to 75 per cent of this territory was used for actual agricultural production. The rest of this area was not planted on account of the insufficiency of water in the irrigation system, and some other causes, such as marshy and fallow lands etc. Therefore, the real irrigated area must be considered as 10 to 10.1 million acres. The irrigated area of Transcaucasia in the pre-war time amounted to 2,078,260 acres, and almost all of it was used for general agricultural purposes.

FIVE-YEAR PLAN FOR IRRIGATION

According to the Five Year Plan for the season 1932-1933, it was proposed to have in Central Asia about 10,774,000 acres of irrigated land, or about 700,000 more than the actually irrigated area for the pre-war time.

It was planned to have 3,275,000 acres of irrigated area in Transcaucasia, or an increase of 1,197,000 acres as compared with the pre-war time. During the period 1924-1929 in Central Asia and Transcaucasia an amount of 254,255,000 roubles was spent, and for the season 1931-32 it was planned to invest an additional sum of 172,000,000 roubles for irrigation works, water administrations, etc.

In spite of the depreciation of Soviet money, the above mentioned sum is the largest investment of capital for irrigation ever known. Available information shows that the progress of irrigation works is much slower than was planned, and there is no doubt that the programme will not be executed.

The tremendous increase in cotton acreage during the last period occurred on the limited irrigated territory. In Central Asia, where about 85 to 90 per cent of all Russian cotton growing is concentrated, cotton occupies about 40 to 45 per cent of all irrigated territory. The percentage in Transcaucasia is much lower, but this country does not play an important role in cotton culture as a whole. Taking into consideration that all the irrigated land available for cotton growing is used at the present time, it is evident that the Soviet cotton production has reached its limit for many years to come. Therefore, it is also evident that the Plan estimate of production for 1932-1933—3,7477,000 bales—will not be realized.

[Photo R Byrd

Cotton Picking in Snow, Central Asia

NEW REGIONS OF COTTON PRODUCTION

In speaking of the new regions of cotton production, the term should be construed as referring to areas quite apart from the irrigated districts of Central Asia. These districts comprise the southern part of Russia, northern Caucasus, Crimea, Ukraine, Daghestan and the lower part of the Volga River region. These lands are situated in 42° 40″, and 47° 25″ North Latitude, but most of these new regions lie between 44° 40″ and 47° 25″ North Latitude, and might be compared in the United States with

Boston in the east and Astoria Oregon in the west Any student of American cotton growing conditions quite readily would come to the conclusion lands in these latitudes are hardly suited to the growing of a semi tropical plant like cotton

The climatic conditions of the majority of the regions are unfavourable to cotton growing in spite of the fact that selected varieties of cotton with a short period of vegetation are used Due to the very low yield per acre there is no real economic foundation for cotton growing but it is performed in order to have cotton at any cost The development of cotton growing in the new regions was performed in order to increase the total cotton production on the territory without irrigation in view of the fact that the irrigated land in all recognised cotton regions had been completely employed

Ul to R B nl

A Soviet Cotton Picking Machine Tashkent

Only a small portion of these lands are under irrigation In 1930, in all the new regions above referred to, there was a harvested area of 261 000 acres and a cotton crop of 10 300 bales These figures go to show quite clearly how ill suited are these new districts to cotton culture The average yield per acre in 1929 was 18 lbs per acre, and in 1930 it reached only 20 7 lbs The cotton received was of a very low quality with undeveloped fibres representing from 10 to 50 per cent of the total receipts

EGYPTIAN COTTON

Some experimental work was done in order to produce Egyptian staple in the southern part of Central Asia and in some parts of Transcaucasia The transplantation method was worked out successfully and increased the vegetative period of cotton At the present time, this method is being introduced in the peasants' fields. In 1930, 2,840 acres were planted with Egyptian cotton, and 40,800 in 1931, with 74,000 acres planned for 1932.

It is difficult to forecast the future of the attempt to grow Egyptian cotton in Russia. Undoubtedly there is some possibility of success, but the results will not be particularly important.

SPINNING INDUSTRY.

In 1914, the Russian industry had 9,111,000 spindles, including Poland and Finland, and before the war, Russia occupied third place among the European countries. For many years the Soviet statistics showed the number of spindles as equal to 7,612,000. In 1932 this number suddenly increased to 9,000,000 spindles, but the real cause of this change is unknown.

COTTON CONSUMPTION IN THOUSANDS OF BALES (500 LBS)

1914	1,998
1928–1929	2,056
Year ending January 31	
1930	2,220
1931	1,936
1932	1,538

Cotton consumption in the season 1928-1929 was a little higher than in 1914, which was the peak for the pre-Revolutionary era. The maximum of Soviet consumption was reached in 1929 (the year ending January 31, 1930) when it was 2,220,000 bales. Then a sharp decline in consumption took place. If we compare the consumption in 1931 (the year ending January 31, 1932, with domestic production of 1930—1,589,000 bales) we find that the consumption almost corresponded with domestic production of raw cotton.

DOMESTIC PRODUCTION AND IMPORTS OF COTTON IN THOUSANDS OF BALES (478 LBS)

	Imported Cotton	Domestic Production	Total
1913	1,024	1,110	2,131
1928	664	1,128	1,702
1929	530	1,217	1,717
1930	266	1,589	1,855

As we see, the sharp falling-off in consumption is accompanied by a sharp decrease in cotton imports. These limited imports came only from Persia and Afghanistan, and the western provinces of China whose only market for cotton is Russia. Some quantity of Egyptian cotton was also imported, as it is required for the production of high counts of yarn.

FOREIGN TRADE AND COTTON IMPORTS.

The cause of the limitation of imports of cotton lies in the foreign trade balance of the Soviets. During the period of three years, 1928 to 1930, the unfavourable balance amounted to 133,000,000 roubles in spite of the extraordinary measures and severe administrative restrictions in the imports of many commodities, including cotton. In order to save the situation and to meet their obligations abroad, the Soviets were forced to increase exports, especially of grain (wheat, barley, oats, etc.). The following quantities of grain were exported:—

1928	89,293 tons
1929	262,247 ,,
1930	4,846,024 ,,

and their value in roubles, respectively, amounted to:—

1928	11,774,000 roubles
1929	22,707,000 ,,
1930	207,608,000 ,,

The quantity of grain exported in 1930 was 61 times larger, and its value only 19 times larger than the figures of 1928. The world economic crisis also affected the Soviets severely and radically lowered their international and financial strength, causing a sharp falling-off in cotton imports.

Due to this condition, the production of yarns decreased in spite of the great shortage of all textile commodities in the country.

PRODUCTION OF ALL KINDS OF YARNS IN THOUSANDS OF METRIC TONS

1927	283·6
1928	329·3
1929	353·8
1930	261·6
1931	281·7*

* Planned.

There were exported 46,740 bales in 1930, and 185,349 bales (of 478 lbs. each) in 1931. These exports amounted to 3 per cent. and 9 per cent. of the respective crops of 1930 and 1931. There was no economic reason for the exports, as the country itself has an imperative need for cotton and cotton goods. The influence which forced the cotton on international cotton markets was the poor financial position of the Soviets, which by the sale of their cotton were able to buy the high-grade foreign cotton—chiefly Egyptian—which was needed for the domestic textile industry.

I think I am well within the limits when I express the emphatic conviction that it will be many years before Soviet Russia is a serious economic competitor as a purveyor of raw material in the world's cotton markets. There may be times when Russia perhaps will be a disturbing seller, but other producing countries may rest on the assurance that these transactions either represent internal financial necessity, with the selling of cotton prompted more by the need of cash, or because Russian cotton at a particular moment may be exchanged advantageously for other growths or other needed raw materials. Russian cotton production is limited by the extent not only of the irrigated area, but also by the area that can be advantageously irrigated in latitudes suited for cotton culture. The new regions into which it has been attempted to extend the growing of cotton are little more suited to this agricultural undertaking than Ohio, Illinois or Kansas.

Moreover, it should be kept in mind that Russia's vast and growing population will require annually not only the finished products that may be turned out of her raw material, but those of a million, and even two million, bales from other countries as well.

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Official Government Report as of October 1, 1932.

The Crop Reporting Board of the United States Department of Agriculture made the following report from data furnished by crop correspondents, field statisticians, co operating State Boards (or Departments) of Agriculture and Agricultural Colleges The final outturn of cotton will depend upon whether the various influences affecting the crop during the remainder of the season are more or less favourable than usual —

State	Acreage for harvest 1932 (Prelim.) Thous. acres	October 1 Condition 10 yr av. 1921-1930* %	October 1 Condition 1931	October 1 Condition 1932	Yield per acre 10 yr av. 1921-1930 lbs.	Yield per acre 1931 lbs.	Yield per acre Indicated 1932 lbs.	Production (Ginnings) 500 lb. gross wt. bales 1931 Crop† Thous. bales	Production (Ginnings) 500 lb. gross wt. bales 1932 Crop Indicated Oct 1 Thous. bales
Virginia	70	61	80	40	210	280	182	42	29
N Carolina	1 251	59	75	56	242	271	198	756	519
S Carolina	1 755	48	63	50	165	245	166	1 005	610
Georgia	2 021	50	61	40	142	194	130	1 393	705
Florida	91	60	76	44	124	175	84	43	16
Missouri	341	61	88	65	240	307	285	289	191
Tennessee	1 012	70	77	64	180	255	175	594	381
Alabama	3 030	56	68	48	158	200	132	1 420	836
Mississippi	3 687	57	63	47	181	203	143	1 761	1 100
Louisiana	1 753	54	69	52	164	220	147	900	540
Texas	13 908	52	69	59	126	165	140	5 320	4 063
Oklahoma	2 960	49	63	58	135	178	155	1 261	950
Arkansas	3 424	54	80	52	160	256	151	1 907	1 081
N Mexico	113	‡79	87	83	‡302	412	385	101	91
Arizona	§113	84	80	86	308	313	356	115	§81
California	123	‡83	82	89	329	440	487	177	120
Other States	17	—	83	60	‡100	363	262	12	10
U S total	36 611	52 8	69 3	54 2	151 4	201 2	149 3	17 096	11,425
Lower Cal ‖	27	—	76	91	†244	182	213	26	12

* Prior to 1924 interpolated from September 25 and October 25 reports
† Allowances made for interstate movement of seed cotton for ginning
‡ Less than a 10 year average
§ Including Pima Egyptian long staple cotton 22 000 acres and 13 000 bales
‖ Not included in California figures nor in United States total

COMMENTS ACCOMPANYING THE ABOVE COTTON REPORT

A cotton crop of 11,425,000 bales is forecast for the United States by the United States Department of Agriculture, based on conditions as of October 1 This represents an increase of 115 000 bales, or 1 per cent above the September 1 forecast

The condition of the crop on October 1 was reported at 51 2 per cent of normal, compared with 69 3 per cent on October 1 1931, and a 10 year average condition (1921 30) of 52 8 per cent The average yield forecast as of October 1 is 149 3 lbs per acre, compared with 201 2 lbs in 1931, and a 10 year average yield (1921 30) of 151 4 lbs The indicated crop is 5,671 000 bales less than the 1931 crop

Most of the increase from last month has taken place in Mississippi, Louisiana, Arkansas, and Oklahoma where the first three weeks of September were favourable to maturing the crop These increases are partly offset by slight declines in Texas and Tennessee

In most parts of the Belt the crop is matured and a large proportion of the bolls are open Picking is progressing somewhat slower than might be expected, because growers are hiring fewer pickers than usual Most growers are picking their crop with the labour available on their own farms, rather than hiring additional help This retarding in picking would result in losses to the open cotton, in the event of prolonged wet weather later in the season

Weather reports since October 1 indicate that light frosts have occurred in parts of the Cotton Belt The Board has not made allowance for frost damage since its report relates to October 1 It should be stated, moreover, that except for the Caprock section of North west Texas, and limited areas along the northern edge of the Belt, frost at this date this year would not necessarily result in materially lower yields

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COTTON GRADE AND STAPLE REPORTS.

Current information on the grades and staples of cotton ginned will be issued by the U S Department of Agriculture at noon on Friday of each week during the ginning season, according to a recent decision of the Bureau of Agricultural Economics The first of these new reports was issued on Friday, September 16

Inasmuch as the weekly statements will be issued in advance of ginning reports of the Bureau of the Census, the weekly reports will show in summary form only the percentages of the various grades and staples of cotton samples from co-operating gins classed during the week previous to their release Percentages of tenderable and untenderable cotton will also be reported

The inauguration of these reports is undertaken in response to requests from cotton growers and the cotton trade that this information on the quality of cotton ginned be released with sufficient promptness to be of use in marketing the crop They will supplement the regular reports based on total ginnings as

PRELIMINARY.

UNITED STATES DEPARTMENT OF AGRICULTURE.

Bureau of Agricultural Economics. Washington, D.C —October 14, 1932.

Percentage Distribution by States of Grade and Staple of Cotton Samples Classed, during the week October 3 to October 8, 1932.
(Percentage based on Samples from Representative Gins, classed according to Official Cotton Standards of the United States)

Grades and Staples*	U.S Total Crop Per cent.	North Carolina Per cent.	South Carolina Per cent	Georgia Per cent.	Oklahoma Per cent	Texas Per cent	Arkansas Per cent	Alabama Per cent	Mississippi Per cent.	Louisiana Per cent	Tennessee Per cent
All Grades	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
Extra White	5·0	·5	·7	·1	—	4·9	·2	—	—	4·5	—
White, G Mid and better	1·3	2·7	2·4	1·8	2·2	·5	·5	1·7	1·1	3·6	·5
White, Str. Mid... ..	24·3	36·4	26·3	31·4	35·2	17·0	23·1	27·7	27·3	28·7	24·9
White, Mid.	46·5	48·3	48·5	36·0	44·3	42·7	55·7	50·5	52·3	45·2	57·0
White, Str Low Mid. ..	14·2	8·3	12·9	10·0	14·0	21·3	17·1	5·5	11·3	14·4	8·6
White, Low Mid. ..	2·1	·3	·7	1·6	2·3	6·1	1·0	·1	·6	·7	·6
White, Below Low Mid.	·3	—	·2	·1	·2	1·0	†	—	†	·1	·1
Spotted & Yellow Tinged	6·3	3·4	8·3	19·0	1·8	6·5	2·4	14·5	7·4	2·8	8·3
Light Yellow St, Yellow St., Grey, Blue St. ..	†	·1	·2	†	†	†	†	†	†	—	—
No Grade	†	—	†	—	—	†	—	—	†	—	—
All Staples (inches) ..	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
Under $\frac{7}{8}$	5·6	·6	·6	3·9	6·8	6·7	1·8	26·2	2·9	10·4	2·4
$\frac{7}{8}$ and $\frac{29}{32}$	32·2	26·7	15·0	54·7	41·9	49·4	13·0	60·9	10·1	34·1	27·0
$\frac{15}{16}$ and $\frac{31}{32}$	29·3	33·9	28·9	29·2	45·5	38·5	26·8	9·8	12·3	29·5	36·3
1 and 1$\frac{1}{32}$	14·7	28·5	30·7	10·5	5·3	4 0	28·5	2·8	12·6	16·2	28·6
1$\frac{1}{16}$ and 1$\frac{3}{32}$	7·3	7·9	13·7	1·3	·5	·3	15·0	·3	14·9	7·3	5·0
1$\frac{1}{8}$ and over	10·9	2·4	11·1	·4	†	1·1	14·9	—	47·2	2·5	·7
Tenderability, Sec. 5 U.S. Cotton Futures Act:	100·0	100·0	100·0	100·0	100·0	100 0	100 0	100·0	100 0	100·0	100·0
Tenderable	93·9	99·4	99·3	95·9	92·9	91·6	98·1	73·6	97·0	89·4	97·2
Untenderable	6·1	·6	·7	4·1	7·1	8·4	1·9	26·4	3·0	10·6	2·8

* Number of bales ginned for period covered by this report not available Number of bales ginned prior to November 1 will be released by the Bureau of the Census on November 9, 1932. Number of bales of each grade and staple ginned to October 1 will be released by the Bureau of Agricultural Economics, October 28, 1932.

† Less than one-tenth of 1 per cent.

reported by the Bureau of the Census, scheduled to be released as follows —

October 28, 1932, for cotton ginned prior to October 1
December 2 1932 ,, ,, ,, November 1
January 6, 1933 , ,, ,, December, 1
February 10, 1933 , January 16
April 14, 1933, for the entire crop as reported
by the Bureau of the Census on or about March 20

Except for that of April 14, the regular reports will in the future contain only a summary of the number of bales of each grade and staple ginned to the stated dates, but the last scheduled report of the season will show the number of bales of each grade within each staple length and of each staple length within each grade, as heretofore

STANDARDS FOR EXTRA WHITE COTTON.

Standards for Upland cotton known as extra white to supersede and replace present standards for grades and colours of extra white cotton have been established by the Secretary of Agriculture and will become effective on August 10, 1933, the Bureau of Agricultural Economics announces These standards will at that time replace the present standards, which became effective August 1, 1930 The Department of Agriculture further stated that until the effective date, August 10, 1933, the new standards may be used as permissive standards in the purchase and sale of extra white cotton in spot transactions when specifically indicated In the absence of specification of the revised standards, and for purposes of deliveries on future contracts, the extra white standards effective since August 1, 1930, will continue in use until August 10, 1933

The new standards include the following No 3 extra white, or good middling extra white, No 4 extra white, or strict middling extra white, No 5 extra white, or middling extra white, No 6 extra white, or strict low middling extra white, and No 7 extra white, or low middling extra white

Official cotton standards of the United States for grade, which embrace the factors of colour, leaf or foreign matter, and preparation, have been established for Upland cotton and for American Egyptian cotton The Upland group includes all cotton grown commercially in the United States except the Sea Island and American Egyptian varieties Of Upland cotton there are nine grades for white cotton, five grades for extra white cotton, five grades for yellow-tinged cotton, three grades for yellow-stained and three grades for blue-stained cotton, all of which are represented in "practical forms" or boxes Standards have also been established for spotted, light yellow stained, grey, and for strict good middling yellow tinged, all of which are bounded and defined by practical forms of adjacent grades Thirty-two of the grades, not including those for the extra white cotton, were established in agreement with foreign cotton trade organizations and are known as Universal Standards for American cotton

In consultation with the industry the principle has been adopted that the leaf or foreign matter and preparation of any grade and colour are governed or determined by the standard for the corresponding grade for white cotton and that the standards for extra white as well as for spotted, yellow tinged, light yellow stained, yellow stained and grey and blue stained cottons determine colour only. The extra white standards apply to any cotton of American growth which corresponds to them in colour and in the promulgation of the revised standards selected bales have been taken from each major section of the Cotton Belt. Inasmuch as a substantial part of the cotton crop in some seasons is of extra white colour, it is expected that the new standards will contribute to convenience and accuracy of classification of cotton of this colour description.

Tentative boxes representing the new standards for extra white colour were examined by representatives of the cotton industry attending a conference at the Department on July 21, and general satisfaction was expressed.

RECONSTRUCTION FINANCE CORPORATION.

On August 30 last the Reconstruction Finance Corporation announced the loan of $35,000,000 to the American Cotton Co-operative Association and $15,000,000 to the Cotton Stabilization Corporation. The basis of the loans is $25 per bale, of which it is understood $17.50 is designed to take care of loans from banks and other charges, while the balance of $7.50 per bale is intended to give co-operative agencies more working capital. None of this money is to be used for dealing in cotton futures.

Backing the Reconstruction Finance Corporation loans will be the cotton now collateral of the bank loans which will be retired. It appeared to be the purpose of the Corporation to influence the Co-operatives to withhold their stocks from the market, thereby sustaining present prices for cotton.

It was the announced policy of the Farm Board to market 650,000 bales during the cotton year which began August 1 last. It is presumed that this intention will not be carried out until the price reaches 12 cents per pound.

The Board made it known a long time ago that it would prepare to part with the holdings of the Cotton Stabilization Corporation at that figure.

Exclusive of the 500,000 bales of cotton earmarked by Congress for the American Red Cross, and part of which has been called for by that organization in its work of clothing the needy, there remains some 800,000 bales of Farm Board cotton in the possession of the Stabilization Corporation. Warehouse cotton of co-operative marketing associations which amounts to 2,000,000 bales is to be withheld.

The conditions exacted by the Reconstruction Finance Corporation in making these advances are that none of the 2,000,000 bales which it will cover shall be sold prior to March of next year, and between that time and the beginning of the new crop year on August 1, unless cotton should go to 12 cents A direct ban is placed upon dealing in the futures markets with Government money

The Farm Board which negotiated these advances and its agencies were hopeful of avoiding these conditions as to selling policies rather wishing to get the benefit of the present high market

Mr Jesse H Jones Reconstruction Finance Corporation director in making the announcements on behalf of the Corporation declared that any announcement as to the policies of the Cotton Corporation as to the disposal of cotton now held by them and the purpose of the loan should be made public by the cotton corporations

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"Red Cross Cotton."

The Vice Chairman of the American Red Cross Society (Mr L Fieser) recently stated that, up to September 17, the American Red Cross Society had contracted to exchange 51 239 bales of Farm Board cotton, voted by Congress to make clothing for the needy, for 20,005 598 yards of cotton cloth

Congress voted 500 000 bales of cotton to the Red Cross

Mr Fieser said that 1 348 Red Cross chapters, representing one third of the country, had up to September 15 requested 20 647,363 yards of cotton cloth

Cloth had been shipped to chapters in every state excepting Delaware

Detailed statistics, available to September 9 show that 1 080 chapters requesting cloth listed 1,679 612 families who would be given clothing

Figures of that date also show cloth in the following varieties approved on chapter requests —

	Yard
Cotton prints	3 811 577
Cotton flannel	3 808 240
Shirting	2 958 633
Gingham	2 152 152
Muslin	2 390 481
Birdseye	816 883

More than 100 000 women have volunteered in our chapters to make this cloth into garments for people in need of clothing," Mr Fieser said We have received reports from our chapters that their first work was upon clothing for school children, and shirts for men and boys

'In hundreds of communities the cloth is being made up in central workrooms according to new style patterns recommended by the Red Cross here In other towns and counties where women have sewing machines and are used to making their clothing, the cloth is given to them In many towns where funds from other organizations are available for work relief, the wives of unemployed are receiving pay for their work as seamstresses

"As in the flour distribution, however, chapters have been warned that the cloth or clothing must not be exchanged for work It must be given absolutely free and solely upon the basis of need No other consideration must enter into its distribution

"Our plan of distribution is that cloth will be sent to every chapter in the United States where the chapter officials say there is need for it We hope millions of garments can be made immediately After we have filled their first requests for shipments of cloth, we propose to ask chapters their needs for a limited variety of ready to wear cotton garments, such as overalls, trousers, underwear, stockings and socks

"The raw cotton will go much further towards purchasing quantities of cloth than it will in exchange for these ready to wear items The need for clothing is so acute if we are to judge by the fact that less than one third of our chapters list 7,500,000 people who are in immediate need of this cotton clothing, that we have adopted every safeguard to obtain the maximum in yardage of clothing that the 500,000 bales of raw cotton can be made to produce

'Through enlisting women volunteers, the cost of manufacture can be saved on many items and also the cost of the small accessories, such as buttons, thread, etc The costs of processing the raw cotton into cloth and its transportation, and similar items of expense, will have to be met in payments of raw cotton, just as in the case of the wheat distribution, when wheat met similar costs of conversion into flour"

RED CROSS COTTON "DUMPED'

In connection with the Red Cross Cotton and its influence on the New York Cotton Market, the New York *Journal of Commerce* writes as follows

"The cotton acquired by the Federal Farm Board on stabilization operations and since donated for relief purposes to the Red Cross is reported by cotton men to be finding its way into the ring here, putting an additional burden on the already weakened market Cotton men foresaw that such would be the case at the time of the gift Many millions of yards of cotton cloth and a considerable volume of finished garments are reported to have been turned over to the Red Cross in exchange for this cotton, and among those who have received the cotton are sundry converters and garment manufacturers who have no use for the cotton, as well perhaps as some mills that may have received grades and staples not suited to their requirements Although it was understood at the outset that the cotton would be exchanged only with those who could use it in the manufacture of yarns and cloths, and so would not revive in the market the spectre of Government selling, the plan evidently had not been adhered to, as the cotton is reported to be finding its way naturally enough into the hands of the cotton merchants who have a market for all grades Some of them have been able to buy the cotton pretty cheaply in view of the converter's need of cash and of the worthlessness of the cotton to him except on the basis of its conversion into money When the merchant gets the cotton he, of course, sells a future hedge against it, adding to pressure on the price Some say that hedge pressure of this sort has been relatively light, others that it has been of very considerable volume It is understood in the trade that conferences have been held recently in New Orleans to consider this phase of the Red Cross cotton distribution

THE MECHANICAL HARVESTING OF COTTON

A bulletin published by Texas Agricultural Experiment Station College Station Tex last August reviews the history and development of cotton harvesting machinery and reports the progress of the Texas Station in the development of a cotton harvester as a tractor attachment equipped with smooth rubber revolving stripping rolls

The study of cotton harvesting machinery was begun by the Texas Agricultural Experiment Station several years ago when sledding was first practiced by the farmers of North west Texas The wide use of the wasteful home made sleds in 1926 showed the need of a more improved mechanical cotton harvester

The results show that the slot type stripper (sled) harvested in 1928 an average of 73 4 per cent of the cotton from 12 varieties tested In 1929 when smooth revolving rubber stripping rolls were used an average of 77 9 per cent of the cotton was harvested from six varieties tested The tractor mounted cotton harvester developed by the station which was equipped with rubber stripping rolls, one of which was yielding harvested in 1930 an average of 88 6 per cent but when improved in 1931 it harvested 91 1 per cent of the total yield of cotton from three varieties tested for the two years

Improvements made in cotton harvesting machinery resulted in a considerable reduction in the trash collected with the machine harvested cotton The home made slot type stripper used in 1928 collected 42 8 per cent of trash while the Texas Station cotton harvester collected in 1931, 34 7 per cent trash for the same three varieties

Several of the more commonly grown varieties of cotton have been tested as to their suitability to mechanical harvesting These varieties were found lacking in storm resistance and had numerous long vegetative branches and an excessive amount of leaves which interfered with the ease of operation of machinery To overcome these undesirable characteristics an attempt is being made by the station to develop a type of plant to meet the requirements of mechanical harvesting This plant is fully described

Cleaning of the mechanically harvested cotton in 1930 and 1931 removed an average of 32 1 per cent waste including invisible loss This consisted of burs stems, dirt and leaf trash leaving an average of 67 9 per cent seed cotton from which the ginning equipment removed an additional 4 7 per cent trash

A comparison of the grade and staple for each of the four years showed that in 1928 the lint from the stripped cotton was four full grades below the hand picked cotton with ⅛ inch shorter staple In 1929 there was a difference of 2½ grades in favour of hand-picked cotton, the stripped cotton having inch shorter staple The stripped cotton harvested in 1930 was 1½ grades lower than hand picked cotton with no significant difference in the

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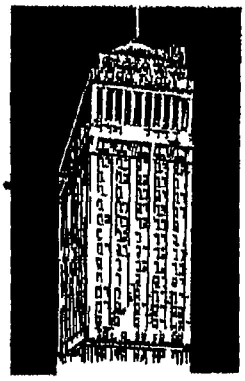

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length of staple In 1931 the stripped cotton averaged only one half grade below hand-picked cotton, with no difference in the length of staple

The average total cost of harvesting, cleaning, and ginning a bale of cotton by machinery in North west Texas was $14 08 as compared with $20 25 for hand snapping, showing a difference of $12 17 in favour of machine harvesting

COTTON LOAN TERMS FOR FARMERS.

More liberal terms on crop production loans in Southern States for the relief of distressed cotton farmers were recenty announced by the Secretary of Agriculture Mr Arthur M Hyde

Under the plan announced by the Secretary, cotton will be accepted as collateral for crop production loans of 1932 and unpaid balance on loans made prior to 1932 on the basis of 9 cents per lb middling ⅞-in Borrowers who wish to take advantage of the collateral plan will be required to deliver their cotton to the cotton co-operative associations or to Federal bonded warehouses

When delivered to Federal warehouses, cotton must be insured and warehouse receipts will be required to be delivered to authorized field agents of the Secretary or to the regional collection office on sufficient cotton to collateralize the loan at the price above-mentioned rather than on the quantity required at current market prices In certain areas the basis will be 9½ cents per lb on middling ⅞-in

Differentials will be prepared to provide premiums for staple longer than ⅞-in and grades better than middling and likewise discounts for short staple and lower grades All cotton deposited as collateral must be graded by Federal licensed classers

All cotton so collateralized must be accompanied by an agreement signed by the borrower whereby he reserves the right of selling such cotton at any time prior to March 1, 1933, and authorizes the Secretary to sell same at his discretion at any time subsequent to that date

It was pointed out that the plan will permit farmers to fully collateralize their loans and still permit them to dispose of the balance of their crops

CHINESE CONSUMPTION OF U.S. COTTON

Information lately received from Shanghai states that Chinese mills during August last have been taking a larger proportion of Chinese cotton, because of the comparatively cheap prices quoted for it in face of the sudden and rapid advance in the American market The expected big crop of Chinese cotton has helped to keep the price of the native growth at a cheaper level In view of the expected good yield of the native growth, a sharp decline in the import of American cotton into China this season is expected, unless something happens to narrow the parity between American and Chinese. Last season the big American crop coincided with a very short Chinese crop, with the result that China consumed the record-breaking total of 883,000 bales of the American staple against 362,000 in the preceding season, but used only 942,000 bales of Chinese cotton against 1,430,000 the season before. This season the American crop is smaller, and the Chinese crop will be of normal proportions, with the result that the consumption pendulum is swinging the other way.

(New York Cotton Exchange Service.)

CARRY-OVER GRADE AND STAPLE LENGTH REPORT.

(In the United States, July 31, 1932.)

(Estimated from date obtained from the Classification of Samples Representing American and Foreign Cotton held in Storage in Public Warehouses, Consuming Establishments, and on Farms, classed according to Official Cotton Standards of the United States.)

Issued by United States Department of Agriculture Bureau of Agricultural Economics

SUMMARY

	1932		1931	
	Bales	Per cent	Bales	Per cent.
Total carry-over (as reported by the Bureau of the Census)	9,682,300	100·0	6,369,400	100·0
Total American Upland	9,564,900	98·8	6,245,800	98·0
Total American-Egyptian	16,500	·2	16,700	·3
Total Foreign grown	100,900	1·0	106,900	1·7
Grades (American Upland):				
Extra White	104,200	1·1	79,400	1·3
White, Middling and better	6,937,800	72·5	3,837,000	61·4
White, strict low and low middling	1,326,800	13·8	1,202,200	19·3
White, below low middling	247,100	2·6	92,700	1·5
Spotted and yellow tinged	884,900	9·3	1,008,200	16·1
Light yellow stained, yellow stained, grey, blue stained	6,900	·1	5,300	·1
No grade	57,200	·6	21,000	·3
Tenderability, Section 5, U S. Cotton Futures Act (American Upland):				
Total Tenderable	8,887,300	92·9	5,543,100	88·7
Tenderable $\frac{7}{8}$ to 1 $\frac{1}{32}$ in. incl.	7,423,000	77·6	4,772,800	76·4
Tenderable over 1 $\frac{1}{32}$ in.	1,464,300	15·3	770,300	12·3
Total Untenderable	677,600	7·1	702,700	11·3
Untenderable in grade only	379,300	4·0	239,500	3·9
Untenderable in staple only	242,800	2·5	423,900	6·8
Untenderable in both grade and staple	55,500	·6	39,300	·6
Staple (American Upland) (inches)				
Under $\frac{7}{8}$	298,300	3·1	463,200	7·4
$\frac{7}{8}$ and $\frac{29}{32}$	3,394,900	35·5	2,615,500	41·9
$\frac{15}{16}$ and $\frac{31}{32}$	2,705,600	28·3	1,528,200	24·5
1 and 1 $\frac{1}{32}$	1,658,300	17·3	849,200	13·6
1 $\frac{1}{16}$ and 1 $\frac{3}{32}$	754,500	7·9	414,800	6·6
1 $\frac{1}{8}$ and over	753,300	7·9	374,900	6·0

CROP REPORTS.

Messrs. Weil Brothers, of Montgomery, Ala., write as follows in their semi-monthly crop letter, dated October 17 last:—

October weather conditions to date, like those of the preceding month, have been generally favourable for the harvesting of cotton, rains have fallen in many sections of the Belt with temperatures lower than normal, but in the main the weather has been open. At an unusually early date, if not a record breaking date, a large portion of the Belt was visited by frosts—light frosts were experienced in the middle sections and heavy frosts in the northern sections of the Belt. As a result, very little top crop can be expected.

Labour being plentiful, picking has made good progress, being almost completed in southern sections. In many sections farmers are picking without employment of labour because of the expense coupled with present prices. Much cotton has been picked and held in the seed, as ginning would take the farmer's time away from picking.

It appears that some farmers are taking advantage of the offer of the Government to advance about 9 cents on cotton, in connection with loans made by the Government this season. The drastic decline of over 3 cents per pound is most discouraging to the producers. The holding movement continues strong, with cotton being sold very gradually and in limited quantities, causing in all sections a very active and spirited demand. The basis has continued to advance, and shows no sign of easing.

Messrs. R. I. Dixon & Bro., Dallas, Tex., in their final crop report for the season, dated October 4, communicate the following:—

The weather during September in our territory has been abnormally wet and cool. Commencing with the torrential rains over Labour Day, we have had intermittent showers and rains throughout the whole month. Night temperatures have also been exceedingly cool for this time of year. These conditions have not been favourable for crop development, except possibly in the West and Oklahoma, where some rain was required. Weevil damage is general, and the gin outturn in South, Central and East Texas is rather disappointing, in these parts of the state the yield has not been increased by the rains.

In West and North-west Texas the crop is not yet fully made. In some places the rains have been beneficial, and must have increased the size of bolls and the prospective yield, but in other parts the rains have been too frequent, and in West Central Texas the weevil damage is considerable. Warm, dry weather is needed to gather the crop, and also to open bolls and prevent boll-rot.

The final yield in West Texas and Western Oklahoma this season depends to an abnormal degree on the frost date. The crop is very much later than usual, and an early frost would do very heavy damage.

In Oklahoma the wet weather was mostly favourable, but boll-weevil damage in Eastern Oklahoma is serious, and expectations in Central Oklahoma are only for an average yield. Crop prospects in Western Oklahoma are good.

The ten-year average decline in condition from September 1 to October 1 is 1 point in Texas and about 4½ points in Oklahoma. This year our correspondents' figures show a decline of 3 points in Texas since September 1 and about 5½ points in Oklahoma. These figures indicate a production in Texas of about 3,900,000 bales and 900,000 bales for Oklahoma, both in 500-lb. bales. With average weights the crop in running bales in Texas would be about 150,000 bales smaller.

The American Cotton Crop Service, Madison, Fla., write as follows, under date October 21 last:—

Weather conditions, except in the Eastern Belt, were favourable for picking and ginning during the past week. Very little rain occurred over the Central and Western Belts, and harvesting made rapid progress. In the Eastern Belt heavy rains occurred over the week end and some damage to open cotton in the field was reported However, the heavy precipitation lowered the grade in most instances, and very little loss in baleage was reported In Georgia and the Carolinas the crop is largely harvested in the southern two-thirds, and the percentage of the crop open to the fields and exposed to the unfavourable weather was relatively small Temperatures were mostly below normal for the Belt as a whole during the week ending October 19, with light frost reported in portions of Oklahoma and in North-west Texas Practically no complaints of labour shortage were reported from any part of the Belt, as the financial depression has caused a large percentage of the unemployed to work in the cotton fields

The tendency on the part of cotton growers to hold for higher prices is still very pronounced, according to late reports from crop reporters In the southern half of the Belt a very considerable amount of cotton was sold during the high market in September However, during the past week farmers in Central and Northern portions of the Belt were reported holding wherever possible on account of the low price tendency In view of the low cost of production of the 1932 cotton crop, and the relative abundance of feed crops grown in the Cotton Belt, cotton growers are in a better financial position to hold cotton than last year In answering questionnaires relative to the price expected for cotton, growers do not appear to have any fixed idea, and state that they do not consider the present price sufficient to cover the cost of production, and are therefore unwilling to sell

Recent frost in local areas of the Central and Western Belts has not materially affected the weevil situation from a standpoint of the number in the field and which is expected to enter winter quarters Our reports from all sections of the infested area indicate more weevils present to enter winter quarters than for any October during the last ten years Attention is called particularly to the increase and spread of the weevil in Central

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and North Texas. Likewise, the pest has multiplied rapidly in North-eastern Arkansas areas of heavy production. In this connection we take the liberty of calling attention to the gradual adaptation of the pest to withstanding colder winter temperatures than when it first spread northward over the Cotton Belt. Information from reliable scientific sources indicates the weevil in Arkansas and Oklahoma now appears to withstand much lower winter temperatures than when this area was first infested by the pest. In the past it has been generally believed that temperatures of 10° F above zero were sufficient when prolonged for a period of two to three days, practically to exterminate the pest or so reduce their numbers as to render the following season's cotton crop in little danger of serious weevil damage. However, research workers, and we are not at liberty to divulge their names, have lately discovered the pest capable of withstanding lower winter temperatures than generally expected, especially in the western half of the Belt. Therefore, with the unusually heavy weevil density present to enter winter quarters, the effect of low winter temperatures on weevil survival should soon become a major factor in the 1933 cotton outlook.

Mr Victor H Schoffelmayer, Agricultural Editor of the *Dallas Morning News*, issued the following statement on October 14th —

Reports to *The Dallas News* for the week ended Thursday state: Picking is rapidly progressing in all areas, a second light frost and near-freeze stopped cotton growth in North-west and North Texas, and, accompanied by bright snappy weather, hastened boll opening, but without any possibility of crop increase except in a dozen counties mostly on the South Plains.

By far the most striking factor is boll-weevil prevalence, which in ninety-six counties this fall is the highest in several years, and in eastward and central counties is responsible for loss of the top crop. The pest has pushed far into the western cotton areas. Added to the weevil are leaf worms which, with recent rainy cool weather have increased heavily and are taking a considerable part of the crop. More weevils possibly will enter hibernation in Texas than for many years past.

North Texas reports about 20 per cent of its cotton late, with about 60 per cent harvested. On the plains only about 18 per cent is harvested, but in North-east, East and Central Texas fully three-fourths has been gathered, and in South Texas gins are beginning to shut down.

Oklahoma cotton is rapidly being picked in all areas excepting the West. The crop is mostly made, following light to killing frost in northern counties. At best, the crop is spotted, with weevil damage heaviest for some years and the insects ready to enter hibernation in larger numbers than usual.

New Mexico shows the crop made in most counties, but with possibility of an increase granted favourable weather in Dona Ana and Eddy Counties. Weather has been quite cold, with picking somewhat slow.

The Cotton Trade Journal submitted the following crop information as of October 14 last:

Light to killing frosts over the northern and central portions of the Cotton Belt checked growth and caused late bolls to open rapidly, with weather during the past week reported generally below normal, correspondents of *The Cotton Trade Journal* throughout the cotton region reported.

Rainfall has been light in the west, only moderate in the central states, and rather heavy in the eastern third of the cotton region. Picking and ginning has made good progress except where delayed by rains in the east. Little or no top-crop is indicated and harvesting is nearly over in Cotton Belt checked growth and caused late bolls to open rapidly, with still active in many sections.

Heavy Frost. In the central states the weather has been cold, with heavy frost in the northern and some central portions, which has stopped further growth. The weevil toll has prevented any top-crop worth men tioning In the eastern third of the Belt heavy rains have somewhat slowed picking and ginning All cotton is about open, and there is no prospect for a top-crop

The details by states follow

Alabama Weather was too cold, with heavy rains in the first part of week delaying picking and ginning Weevil damage is apparently heavy and there will be no top-crop Ginning is one half to two thirds finished with harvest about completed in the far south

Arkansas. Weather cold, with killing frost that has stopped further growth and caused bolls to open rapidly Rains have been moderate early in week Picking and ginning has made good progress and is about two-thirds finished in many sections No top-crop prospects

Georgia Weather has been unseasonably cold, with light to heavy frost following heavy rains in early week Harvesting has been delayed by the weather in many sections Picking is nearing completion in most of the state There will be a top-crop Weevil damage has been heavy

Louisiana The weather has been abnormally cold, with killing frost in north stopping further growth and causing late bolls to open rapidly Rainfall has been moderate, and picking is nearing completion in most sections No top-crop prospect

Mississippi Weather has been cold all week, with killing frost in north and central portions Too much rain in some sections, but moderate only in others Picking nearing completion in southern half and well advanced in north No top-crop

North Carolina Moderate rains with weather colder than seasonable, with killing frost in mountain district Conditions favourable for harvest, with picking and ginning making good progress Crop about all made

South Carolina Rather too much rain and temperature unseasonably cold Harvest has been delayed by the rains, which have done some damage to open cotton Crop about all made, with no prospect of top-crop Weevil damage has been considerable

Tennessee Too much rain complained of, which has delayed picking and ginning Crop is about all made Harvesting is well advanced despite this week's delays Unseasonably cold weather with killing frost has stopped further growth

Oklahoma The weather was mostly clear, with light showers in east, but no rain in west Temperatures unseasonably cold with light frost early in week and killing frost to freezing late in week The cold has caused late bolls to open rapidly Picking and ginning are well advanced

---

The Fossick Bureau report of October 14 last contains the following crop information —

The weather during the past week was mostly favourable for harvesting Temperatures were unseasonably low all over the Belt but more especially in central districts Frost, mostly light, sometimes heavy, occurred over most of the northern half of the Belt, but was of no particular consequence The crop quite generally has been made for weeks A frost terminated top-crop development in North west Texas about October 5, a wet freeze would do considerable damage in the north-west, but the frost during the week was lighter than the preceding one, the first of the season

---

The American Cotton Service, in a later report, dated October 27 last, state that crop condition showed no material change during the week ending October 25 Harvesting proceeded rapidly over the western half of the Belt, with only widely scattered showers reported on one day for Arkansas, Oklahoma and Texas. In the eastern half of the Belt some delay in harvesting occurred on account of showery weather conditions. However, rainfall could not be classed as excessive, and its major effect was to lower grades rather than reduce baleage prospects. Temperatures continued about normal for the Belt as a whole. Since the crop is now "made" in practically all sections, fruitage being stopped by either weevils or frost in most sections, weather conditions from now on will have a tendency to lower grades rather than decrease production possibilities.

Ginnings reported by the Census Bureau for the period ending October 18 were slightly larger than we expected, but indicate the last Government estimate of production will probably be reached, if not slightly exceeded.

MARKET REPORTS.

PROSPECTS FOR THE INDUSTRY: HIGH BASIS.

Mr. C. T. Revere, of Munds, Winslow & Potter, of New York, write as follows on the price situation and the high basis, under date October 22 :—

Instead of reserving our opinion of the price tendency in cotton for a concluding paragraph, we might as well state at the outset that we are convinced that we are on the eve of a major upward move, and that the hazard of a further decline under the weight of the movement imposes only a negligible risk upon buyers.

As a general proposition, the chief pressure of hedges comes from the South-west, as Texas and Oklahoma, as well as portions of Arkansas, are inclined to sell freely, whereas the Eastern Belt and most of the Valley section, with the exception of districts in Mississippi, are inclined to hold when prices are unsatisfactory. Moreover, we see nothing in recent weather developments to indicate any substantial addition to the crop. As a matter of fact, any change would be trivial, and we doubt if it would have more than negligible statistical or psychological importance. Of one thing we may be fairly sure—the grade of the crop has been materially reduced in certain areas as a result of the heavy rains over the last week-end.

The market itself has done little or nothing for a week or more. At times the tone has been easier and prices have receded. This development has been due largely to the unwillingness of either speculative operators or manufacturers to take an extended position on the long side in advance of the November elections. In view of the disposition of alarmists on both sides to modify their direful predictions and to concede the possibility that the world will not smash, no matter who wins at the polls on November 8, we doubt the consistency of dilatory tactics. We are firmly convinced that the economic trend is upwards, and that while political muddling and meddling may impede the progress toward recovery, the interference or interruption will be only temporary.

As a matter of fact, we do not believe that economic rehabilitation depends entirely upon developments in the United States. The Old World, with a realism seasoned by centuries of vicissitudes, is beginning to take matters into its own hands. Two striking developments of the week, in our opinion, have related significance. Private cables from India announced the lifting of the boycott on British cotton goods. While this item received no special prominence in the press, we have been informed that the announcement came from an official source. This step taken in conjunction with the Indian preferential tariff on British goods assures a great market for Lancashire.

Synchronizing with this news item came a sudden decline in sterling. Hitherto a break in the pound has been the signal for uneasiness. Such was not the case this time. Although various explanations for the decline in sterling have been forthcoming, and we admit that our view of the movemen is largely surmise, we think the downward movement in sterling exchange may easily be part of a plan to place British industry and particularly the textile division in a position to compete aggressively in the export markets of the world

Such developments it seems to us foreshadow a marked increase in cotton consumption Finished goods will be delivered to Far Eastern populations at prices more nearly in keeping with depleted buying power

There has been much comment in textile circles regarding the high basis the disparity at which future contracts are selling in relation with actual cotton in the South and the uncomfortable plight of manufacturers as a result of this dislocation

In our opinion much of the criticism reflects a lack of understanding of the future contract system as well as the manner in which mill executives should cope with the situation A high basis so called is the result of one or the other of two factors Either actual cotton under certain conditions is at an abnormal premium over contracts or contracts for one cause or another are for the time being below a normal parity with cotton in southern markets

At present the latter set of conditions prevails No single reason may be advanced to explain this state of affairs It is necessary to take into consideration governmental and semi governmental stocks which are not effectively in the supply merchant stocks of cotton carried over from last year all hedged and warehoused the strong holding movement by growers in portions of the Central Belt and most of the Eastern Belt all of which make for a tight position

On the other hand we have the moderate selling of hedges by merchants in Texas, Oklahoma and Arkansas At no time have the daily amounts been as large as in previous years These portions of the Cotton Belt generally sell freely no matter whether the price is satisfactory or not This moderate pressure taken in conjunction with a waiting attitude on the part of the speculator and the speculative investor the disposition of mills either to buy only on a scale down or to await the result at the November polls all have contributed to lessened demand and a resultant exaggeration of moderate hedge pressure

Manufacturers are inclined to believe they are the victims of a vicious system Future contracts are well below spots The novice immediately assumes that the proper procedure would be to buy contracts and take up cotton as tendered Faced by uncertainty not only regarding delivery points but by the wide variety of grades and staples likely to be received while their equipment is adjusted to a particular grade and staple the acceptance of delivery by a single mill corporation is practically out of the question

That manufacturers find such difficulties is no reflection on the future contract system in cotton or any other organized market Primarily the future contract system was devised as a medium for insurance against unfavourable price changes and necessarily it had to be developed along lines suitable to the needs of the merchant

Cotton manufacturers with the exception of those who buy a portion of their requirements at mill doors in the South do not represent the group that takes the product of the cotton grower These are the merchants who buy the cotton as it comes from the gins taking all grades and staples and hedging their accumulations if they have no immediate spinner outlet for their purchases

It is hardly to be expected that the merchant with an expensive organization is going to inspect grade and staple the thousands and thousands of bales he obtains put these in even running lots and tender them on notice day at the contract price The labour and expense involved call for a return on such service and that is the reason why premiums are asked for selections although at the same time a notice of tender may call for the delivery of a wide variety of grades and staples with the price substantially below that on the selected lots

In our opinion the manufacturer is not penalized by this set of conditions The merchant however, is entitled to a charge for his service as well as a profit on his capital investment and ability

HISTORY OF THE COTTON CROP.

	1932 33	1931–32	1930–31	1929–30	1928–29
Acreage planted	37,290,000	41,189,000	46,078,000	47,067,000	46,695,000
Acreage harvested	36,611,000	40,693,000	45,091,000	45,793,000	45,341,000
Yield per acre ..	149·3	200·1	147·7	155·0	152·9
Condition Aug 1	65·6	74·9	62·2	69·6	67·9
Condition Sept. 1	56·6	68·0	53·2	55·4	60·3
Condition Oct 1	54·2	69·3	53·5	55·0	54·4
Indicated crop .					
Aug 1 ..	11,306,000	15,584,000	14,462,000	15,543,000	14,291,000
Sept. 1 ..	11,310,000	15,685,000	14,340,000	14,825,000	14,439,000
Oct 1 ..	11,425,000	16,284,000	14,486,000	14,915,000	13,993,000
Nov. 1 ..	—	16,903,000	14,438,000	15,009,000	14,133,000
December prod est.	—	16,918,000	14,243,000	14,919,000	14,373,000
Ginned to					
Aug. 1 ..	70,978	7,301	77,956	86,970	88,761
Aug. 16 ..	251,000	90,414	572,810	304,771	279,568
Sept. 1 ..	865,000	565,160	1,879,919	1,568,434	956,577
Sept. 16 ..	2,627,000	2,091,513	3,736,120	3,351,613	2,500,781
Oct 1 ..	4,835,465	5,408,307	6,303,895	5,903,205	4,961,360
Oct. 18 ..	7,311,000	9,498,041	9,254,968	9,094,704	8,151,271
Nov 1 ..	—	12,129,546	10,863,896	10,891,940	10,162,482
Nov. 14 ..	-	14,210,301	11,962,827	11,890,006	11,320,688
Dec 1 ..	-	15,023,451	12,834,970	12,857,971	12,560,154
Dec 13 ..	-	15,358,405	13,259,622	13,461,630	13,144,333
Jan 16 ..	—	15,992,204	13,592,104	14,187,779	13,888,972
Total ginned (lint)	—	16,628,874	13,755,518	14,547,791	14,296,549
*World cons Am	-	12,319,000	10,908,000	13,023,000	15,076,000
Carryover (Hester)†	--	12,911,000	8,710,000	5,939,000	4,395,000
Average price mid (Liverpool) ..	—	4·82	5·71	9·09	10·52
Value of crop ..	—	—	$693,000,000	1,211,217,737	1,447,632,705

† Commercial bales others 500 lbs. * Exclusive of linters and waste.

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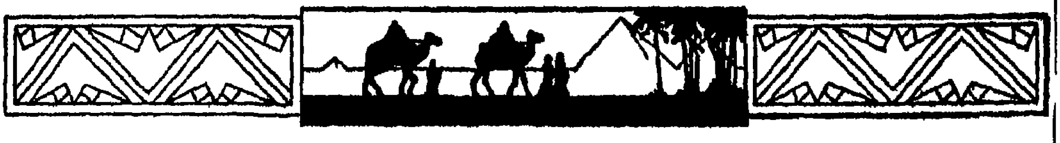

EGYPTIAN COTTON

First Government Crop Estimate, 1932.

After consideration of all available data received by the Ministry of Agriculture concerning the condition of the cotton crop at present, the Ministry issues its first estimate of this crop for the present year as follows:—

	Seed Cotton		Ginned Cotton (excluding Scarto)	
Variety	Total Cantars	Average Yield per feddan Cantars	Total Cantars	Average Yield per feddan Cantars
Long staple varieties (above 1⅜ in) Maarad Sakha 4 Sakellaridis Giza 7 Casulli	1,541,237	3·12	1,539,856 of which 1,080,032 Sakellaridis	3·12
Average staple varieties (above 1¼ in) Fouadi Nahda Pilion Giza 3	330,787	3·60	353,740	3·85
Short staple varieties (above 1⅛ in) Zagora Ashmouni Various	2,106,056	4·14	2,300,947	4·53
Total	3,978,080	3·64	4,194,543	3·84

RENEWAL OF THE COTTON TAX.

The Council of Ministers, on the proposal of the Ministry of Finance, has approved a decree renewing for a further period of one year the decree issued on September 8, 1931, reducing the cotton tax to P.T.10 per cantar. The new decree was published in *Official Journal*, No 75 of August 27 1932 and came into force on the same day.

The cotton tax was first imposed on April 18 1920 when the Government fixed a tax of P.T. 35 per cantar on all classes of Egyptian cotton. On September 2 1922 this was reduced to P.T. 25 and Scarto was exempted from the tax; on September 17, 1926, it was brought down to P.T. 20 per cantar, and on September 8, 1931, it was again reduced to P.T. 10 and this figure has now been renewed for a further period of one year.

GERMAN FERTILIZER FOR EGYPTIAN COTTON

The agreement between the Egyptian and German Governments concerning an exchange of cotton for chemicals has, it is reported, now been signed. Under this agreement the Egyptian Government is to purchase from the Nitrogen Syndicate some 50,000 tons of calcium nitrate, valued at about RM 5,000,000, in return for which they are to supply cotton of equivalent value to a number of Bremen cotton houses. The cotton is to be taken up within a period of not more than twelve months. The negotiations have been carried out through the intermediary of the Dresdner Bank. Another report states that the quantity of cotton to be received by Germany is 15,000 bales.

EGYPTIAN COTTON ACREAGE

The "Missr" Cotton Export Company, Alexandria, in their October report, write in regard to the new Egyptian acreage restriction law as follows:—

The Council of Ministers, at its meeting in Cairo on October 6, fixed the following acreage for the next cotton season:

In the section of the Northern Delta, where only Sakel is allowed to be grown, farmers are to plant up to 40 per cent of their holdings under Sakel, against 30 per cent in the previous year. In the other parts of Egypt cultivators may grow any kind of cotton they like (except Sakel) on 50 per cent of their holdings, against 25 per cent last year.

According to the statistics of the Ministry of Agriculture, the fellaheen had planted last year 1,093,000 feddans, which is less than they were by law entitled to plant. They have therefore given proof that they knew themselves when to restrict the cotton acreage. However, the Government, fearing that owing to the recent rise the farmers might go this year to excesses, has deemed it advisable to decree some slight restriction, but in reality the acreage will be more or less the normal one. This law enables the farmers to grow cotton on about 1,800,000 feddans, which might give a crop of 7,000,000 to 8,000,000 cantars.

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HANDLING CHARGES IN EGYPT.

We extract the following table from the "Egyptian Cotton Year Book":—

AVERAGE COST OF EGYPTIAN COTTON FROM THE FARM TO PORT OF LANDING IN PIASTRES PER CANTAR

	Lower Egypt P.T.	Upper Egypt P.T.
From farm to ginning factory:		
Transport from farm	4·00	3·50
Loss in weight during transport	1·20	1·00
Weighing	1·00	1·00
Proportion of cost of the jute bag	1·50	1·50
Cost of receiving the cotton	1·00	1·00
Brokerage	3·00	3·00
	11·70	11·00
From ginning factory to Alexandria:		
Ginning charges all inclusive	10·00	12·00
Bale covers	1·00	1·00
Insurance during ginning and up to Alexandria	0·50	0·50
Railway freight to Alexandria (average)	3·00	4·50
Loss in weight during transport	0·50	0·50
Ginning tax	10·00	10·00
Allowance for overhead charges	3·00	3·00
Interest charge 30 days at 6 per cent.	2·50	2·00
Bank commission at ¼ per cent.	1·20	1·00
	31·70	34·50
From Alexandria to port of landing:		
Transport to warehouse from RR Station	0·30	0·30
Handling	0·15	0·15
Weighing and supervision	0·50	0·50
Storage 30 days	0·70	0·70
Fire assurance 30 days	0·20	0·15
Brokerage futures and stamp duties	1·10	0·85
Interest charges 30 days at 5 per cent.	2·10	1·70
Farfara	1·00	1·00
Pressing charges (on gross weight)	7·70	7·70
Loading charges	0·30	0·30
Freight (average to various ports)	7·50	7·50
Allowance for overhead charges	4·50	4·50
Discount and exchange charges 3/m Bank Bill 97½	1·50	1·30
Selling agent commission (1 to 1½ per cent. average)	5·00	4·50
Marine insurance	1·00	0·90
Loss in weight during transport	1·50	1·20
Controller's fees	0·20	0·20
Export tax	10·20	10·20
	35·35	33·55
Total charges per cantar	78·25	77·55

"EGYPTIAN COTTON YEAR BOOK, 1931-32," edited by George Pilavachi, P.O.B. 612, Alexandria. Published at 25 piastres, or 6s., post free.

This is the first edition of a very useful year-book of Egyptian cotton and a reference-book that has been much required in the past. The editor gives his review of the cotton season, which contains many interesting points upon the Egyptian cotton crop. The year-book also contains a variety of statistics dealing with production of Egyptian cotton, useful tables showing costs to which Egyptian cotton is subject before leaving the country, etc. Various accounts are also given of the different cotton organizations in Egypt. Descriptions of the various types of Egyptian cotton are included, together with statistics of their production during recent years.

STOCK OF COTTON IN ALEXANDRIA 31st AUG., 1932.

We give below details of the stock of cotton in Alexandria on August 31, 1932, as issued by the Statistical Department of the Ministry of Finance, together with the comparative figures for August 31, 1931; quantities are expressed in nett cantars:—

Variety	Total Stock Alexandria 31/8/32	Government's Proportion	Commercial Stock 31/8/32	Total Stock Alexandria 31/8/31
Sakellaridis	1,327,185	754,978	572,207	1,916,619
Ashmouni	1,410,063	904,421	712,140	1,868,667
Zagora	206,504			
Pilion	116,378	26,519	89,859	161,870
Maarad	91,901	1,893	90,008	33,085
Nahda	44,261	2,839	41,422	19,460
Fouadi .. ., ..	15,297	40	15,257	19,510
Giza No 3	6,095	1,304	4,791	7,146
Giza No. 7	33,778	—	33,778	4,019
Casulli and White Cotton	2,091	140	1,951	3,698
Sakha No 4	2,311	—	2,311	-
Various	4,705	152	4,553	18,602
Sekina	14,856	—	14,856	11,537
Scarto and Afrita ..	7,678	—	7,678	1,395
Total	3,283,103	1,692,286	1,590,817	4,068,608

VARIETIES OF COTTON PLANTED 1931 AND 1932.

(According to the Egyptian Ministry of Agriculture)

	1932 Feddans	1931 Feddans
Sakellari	369,294	478,579
Ashm. and Zag	506,973	758,643
Maarad	69,590	110,958
Pilion	39,137	157,477
Giza 7	35,086	34,710
Nahda	29,323	53,252
Sakha 4	17,955	3,950
Fouadi	16,820	39,610
Giza 3	6,569	37,510
Casulli	1,591	6,060
Other varieties	1,363	2,180
Total	1,093,701	1,682,938

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EGYPTIAN COTTON MARKET REPORTS.

Messrs. Alexandria Commercial Co. (S.A.) have communicated the following report, dated October 7, 1932 :—

Crop, 1932 : We consider the Government's figure of 4,194,543 cantars lint cotton slightly below the reality, and estimate that the crop will reach about 4,500,000 cantars, of which Ashmouni and Zagora 2,550,000 cantars, Sakellaridis and Sakha 4 — 1,100,000 cantars, Maarad 300,000 cantars, Pilion 175,000 cantars, Giza 7 — 150,000 cantars, Nahda 125,000 cantars, Fouadi 75,000 cantars, and various 25,000 cantars. This estimate is naturally based on the acreage figures given by the Government. As the crop is not yet entirely picked, weather conditions during the next few days may slightly affect, one way or another, the estimate given above.

Crop, 1933 : The Government has just taken a decision to change considerably the restrictions on the acreage to be planted with cotton next year. The permitted area is raised to 50 per cent. of the total of each grower, against 25 per cent. this year. The percentage for Sakel is raised to 40 per cent. against 30 per cent. this year, but, still following the law of 1931, is again limited to the districts of the north of the Delta only.

Messrs. Reinhart & Co., Alexandria, favour us with the following report, dated October 28 last :—

The outstanding factor of the week was the new heavy decline of the sterling rate from $3.40 to $3.27½. In spite of this, our market remained weak, the absence of any fresh speculative buying and large price fixings for account of the Interior, which are particularly important at this time of the season, preventing any serious upward movement. Ashmouni futures were more sustained than Sakellaridis contracts in consequence of the firmness of the spot market. The gold parity between our growths and Americans has somewhat improved during this week, which was reflected by a better demand from spinners, especially from the Far East.

Ashmouni. 28,500 cantars were tendered through the October contracts on the last notice day of this delivery month. These tenders were taken up by two export firms, notwithstanding the big discount of December contracts below October, which would have allowed them to transfer their positions advantageously. The dockets consisted mainly of higher grades Zagora and Pillion, for which qualities the demand on the spot market has been poor of late. Medium grades are still oversold, and as long as this situation continues, the near Ashmouni months will probably make premium above the more distant delivery months.

Arrivals. The crop movement continues to be very slow. Arrivals at Alexandria since September 1 total 130,365 bales, as against 189,917 bales during the corresponding period in 1931, and 208,917 bales in 1930.

Exports. The lateness of the crop and the small arrivals are reflecting themselves on exports, which are showing a deficit of approximately 20,000 bales for the first two months of the season, i.e., 85,460 bales, as against 107,175 bales in 1931. Engagements for shipment during November and December are, however, important, and it is possible that last year's figures will be reached within a few weeks.

Spot Market. The situation on the spot market has not undergone any noticeable change during the last week. The main interest is still concentrated on medium grades Ashmouni, but a better demand is making itself felt for Sakellaridis, especially for all grades below fully-good-fair to good. Increased interest is shown also for varieties such as Guizeh 7 and Maarad. Owing to the small difference between Sakellaridis and Ashmouni contracts, these qualities can at present be bought at bargain prices.

EXPORTS OF COT-

TWELVE MONTHS --1st SEPTEMBER,

Total.	Exporter.	England	France	Poland	Austria	Italy	Germany	Spain	Switzerland
74,553	Soc. Misr pour l'Exp. du Coton (ex Lindemann)	16,451	2,323	1,010	1,740	967	17,811	385	3,111
74,390	Peel & Co., Ltd.	22,587	11,028	300	616	3,583	3,220	11,736	1,108
66,003	Alexandria Commercial Co.	33,920	1,336	50	2,009	9,025	3,045	205	250
52,414	Carver Bros. & Co., Ltd.	16,871	7,482	502	590	6,705	6,013	4,780	412
45,602	Pinto & Co.	7,846	1,908	-	30	26,120	4,806	600	366
44,733	Choremi, Benachi & Co.	9,252	3,312	323	120	1,465	588	1,151	7,231
44,673	Reinhart & Co.	3,850	5,508	172	648	463	4,690	1,236	2,975
39,584	Cicurel & Barda	10,244	6,703	1,730	702	1,710	5,007	2,315	525
35,081	Planta, J., & Co.	13,372	1,250	—	690	5,090	2,225	5,953	1,836
35,027	Egyptian Produce Trading Co. S A. ..	21,826	1,503	100	- -	1,823	2,205	209	30
31,204	Fenderl & Co.	10,338	3,028	4,054	75	2,141	2,765	1,840	1,115
28,696	Anderson, Clayton & Co.	3,904	3,782	245	575	4,395	5,017	650	810
25,777	Rolo, J., & Co.	9,370	4,306	—	—	200	30	1,280	368
22,327	Kupper, H.	601	2,716	1,210	—	380	4,503	145	3,310
21,071	Ahmed A. Farghaly Bey	13,043	1,225	—	- -	2,211	150	25	-
20,957	Salvago, C. M., & Co.	5,971	5,611	—	- -	2,295	3,581	65	300
20,808	Escher, W.	107	361	—	- -	385	18,287	230	710
20,282	British-Egyptian Cotton Co., Ltd. ..	11,142	3,067	—	—	1,150	—	1,385	120
18,605	Getty, W., & Co.	2,079	2,398	—	—	3,035	2,641	1,005	2,498
17,931	Union Cotton Co. of Alexandria	6,957	3,984	—	—	2,926	-	1,510	130
17,420	Japan Cotton Trading Co., Ltd.	—	—	—	—	—	-	—	-
14,646	Société Cotonnière d'Égypte	10,018	323	170	100	101	925	230	105
14,606	Eastern Export Co. S.A.	11,209	—	131	132	—	1,540	150	120
14,350	Levy, Rossano & Co.	12,330	1,203	—	- .	210	-	—	—
14,318	Alby, Albert & Co.	5,486	4,828	—	—	1,250	1,820	10	421
13,077	Psomadellis & Co.	8,581	1,185	—	125	1,058	570	- -	602
12,830	Gregusci, C., & Co. (Anc. G. Frauger & Co.)	3,090	2,788	120	- -	200	2,603	850	180
12,773	Engel Adrien & Co.	6,812	1,202	—	—	27	990	107	-
11,652	Cotton Co. (W. F. Russi)	7,547	45	100	250	303	450		1,402
10,622	Daniel Pasquinelli & Co.	6,013	1,837	—	—	200	—	560	
9,021	Egyptian Cotton Ginners & Exporters ..	5,714	451	—	—	10	—	—	—
8,823	Coury Georges & Co.	1,997	3,143	—	—	- -	- .	3,380	-
8,456	Zalzal, M. A.	5,876	30	180	78	215	961	100	100
7,988	Anglo-Continental Cotton Co.	5,040	1,172	- .	—	308	600		—
6,997	Aghion, Riquez & Co.	5,044	1,364	123	- -	385	76		. .
6,613	Elia & Bibaco	5,063	—	200	150	1,200	. .	. .	
5,787	Sidi, Fox & Co.	5,726	60	—	- -	. . .	-	.	
5,686	Cambas, P., & Co.	1,370	875	—	—	565	2,365		90
5,648	Casulli, M. S., & Co.	750	963	—	465	800	871	75	1,238
4,800	Joakimoglou, C. Z., & Co.	886	420	—	—	134	1,160	.	.
4,465	Riches, Duckworth & Co.	4,205	—	—	- -	260	—	.	.
4,822	Francis, Levy & Co.	3,761	87	- -	110	152	. .	10	. .
4,305	Rogers, E. P., & Co.	2,950	—	—	—	80	360	40	- .
4,192	Comptoir Cotonnier d'Égypte	2,153	753	—	—	600	- .	311	. -
3,997	Hess, A., & Co.	3,130	—	—	- -	—	600	.	.
3,050	Moursi Brothers	—	1,855	45	—	—	—	- .	- .
3,200	National Bank	—	1,200	—	—	- .	2,000	- .	. .
740	Yazgi, A. & W.	670	—	—	—	—	10	50	. .
362	Rodocanachi & Co.	360	—	—	—	—	—	- .	- .
248	Banque d'Orient	248	—	—	—	—	—	. -	.
50	Barclays Bank (D. C. & O.)	50	—	—	—	—	—	—	. -
5,106	Others	3,772	65	—	—	506	448	—	- .
981,953	Total	363,306	98,949	11,428	9,031	84,370	105,187	45,875	32,339

Total of 981,953 bales weighing 7,246,132 cantars.

TON FROM EGYPT

1931, 31st AUGUST, 1932 (in bales)

Belgium	Portugal	Holland	India	Japan	Czecho Slovakia	Greece, Syria and Turkey	U S A.	Esthonia	Russia	Sweden	Canada	Hungary	China	Others
2,105	120	45	1,426	4,400	2,206	—	4,008	—	—	97	—	14,791	1,220	1
20	—	210	3,866	5,350	490	—	5,294	—	1,012	—	—	90	400	—
2,205	170	—	1,636	5,025	108	—	3,760	—	—	100	300	—	2,850	—
—	—	50	1,216	—	884	—	4,080	50	1,900	—	—	—	—	—
—	—	—	1,220	—	2,390	45	100	—	—	—	—	—	—	—
115	50	—	3,481	800	6,025	—	3,600	—	1,640	—	1,350	30	—	—
—	—	—	5,786	15,401	560	—	54	—	—	350	—	30	2,050	—
516	—	136	6	100	60	—	150	—	—	110	200	—	250	—
10	100	—	—	2,300	2,846	—	—	—	—	—	—	—	—	—
—	—	—	100	—	345	—	2,005	—	1,281	7	—	5	—	48
126	—	—	2,050	1,250	300	25	1,090	—	—	77	—	—	—	—
100	36	1	2,276	1,200	50	—	2,025	910	—	—	175	200	1,325	—
—	—	—	436	—	302	—	9,325	—	—	—	—	—	—	100
—	130	100	3,642	1,000	—	—	—	—	—	90	100	30	840	—
—	—		2,309	—	—	—	2,018	—	—	—	—	—	—	—
50	—	60	2,448	—	—	1	—	—	575	—	—	—	—	—
—	—	—	200	—	588	—	—	—	—	—	—	—	—	—
—	—	—	1,305	1,864	—	—	185	—	—	—	—	—	—	4
—	195	—	—	—	594	70	1,150	—	—	—	—	—	—	—
480	50	—	720	—	100	—	225	—	840	—	—	—	—	—
—	—	—	25	16,995	—	—	—	—	—	—	—	—	400	—
—	—	—	1,004	—	100	20	—	—	—	50	—	—	—	—
—	—	90	—	—	150	—	1 012	—	—	—	—	—	—	—
—	—	33	475	—	—	—	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	200	—	—	—	100	—	—	—
—	—	30	836	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	50	—	—	—	1,050	—	—	—	—	—
—	—	—	2,045	—	—	—	205	—	—	—	—	485	—	—
—	—	—	59	—	150	—	1,250	—	—	—	—	—	—	—
290	—	—	1,183	—	330	—	200	—	—	—	—	—	—	—
—	—	—	2,846	—	—	—	—	—	—	—	—	—	—	—
297	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	155	60	25	—	616	—	—	—	—	—	—	—	—	60
—	—	—	303	—	—	—	25	—	—	450	—	—	—	—
—	—	—	5	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	—	—	—	—	—	115	—	—	—	—	—	—	—	—
—	—	—	650	—	2	102	20	15	—	—	—	—	—	—
—	—	—	1,010	—	685	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	202	—	—	—	—	—	—	—	—	—	—	—
—	—	—	875	—	—	—	—	—	—	—	—	—	—	—
237	—	—	75	—	—	—	—	—	—	—	—	—	—	—
—	—	—	1,750	—	—	177	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	10	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	2	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	116	—	11	—	—	188	—	—	—	—	—	—	—	—
6,751	1,432	985	50,061	58,685	20,090	1,135	47,081	975	12,198	1,331	2,525	15,661	10,235	214

WEEKLY BULLETIN OF THE BOURSE DE MINET-EL-BASSAL, ALEXANDRIA.

28th OCTOBER, 1931.

EXPORTS

	Arrival	England		Continent and other countries		United States		Total		Stock
	Cantars	Bales	Cantars	Bales	Cantars	Bales	Cantars	Bales	Cantars	Cantars
This week .	281,709	5,859	42,940	9,421	69,795	55	407	15,335	113,142	3,779,229*
Same week, 1931	406,191	10,320	75,941	12,989	96,014	25	185	23,334	172,140	4,852,042
„ 1930	330,074	8,901	65,547	15,819	117,548	167	1,213	24,887	184,308	4,327,054
Since Sep 1, 1932	1,127,900	21,507	180,039	58,363	432,679	2,500	19,056	85,160	631,774	—
Same period, 1931	1,552,359	39,712	292,377	62,976	406,527	1,268	9,381	103,956	708,285	
„ 1930	1,727,919	40,624	299,525	74,412	551,711	888	6,600	115,934	857,836	–

* In the stock of 3,779,229 are comprised 1,554,226 cantars net, the property of the Egyptian Government, of which 310,873 cantars have been sold locally, and not withdrawn, and 13,109 cantars sold to foreign countries and not yet withdrawn The remaining unsold stock is composed of Sakel 702,151 cantars, Ashmouni-Zagora 498,613 cantars, Pilion 20,719 cantars and others 8,728 cantars net.

GOVERNMENT SALES

Messrs Nicolas G. Vitiades, Alexandria, in their market letter dated October 28, state that newspapers report the negotiations between the Egyptian Government and a group of Dutch and Belgium textile manufacturers as regards the sale of 15,000 bales of the Government stock are progressing favourably, and on the principal points an understanding has been arrived at. The Government, although having previously declared not to sell any further cotton during this season, will make an exception in this instance as the buyers in question are representing firms who were not employing Egyptian cotton previously.

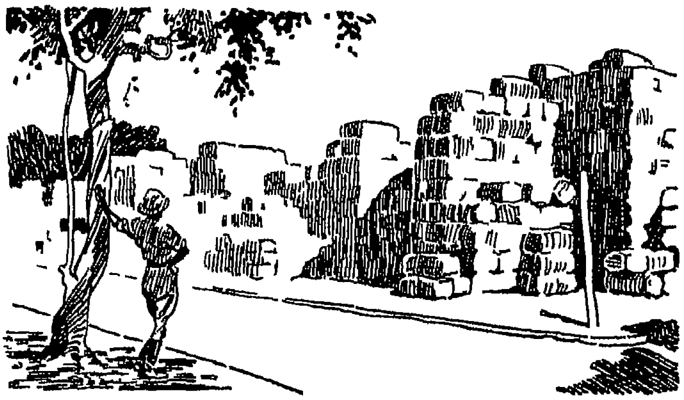
EGYPTIAN COTTON CONSUMED IN U.S.A.

(Issued by U.S. Bureau of the Census)

Equivalent 500-pound bales.

Month	1923–24	1924–25	1925–26	1926–27	1927–28	1928–29	1929–30	1930–31	1931–32*
August	17,819	11,715	16,213	17,629	22,469	18,759	20,285	7,073	5,675
September . ..	15,740	18,523	17,966	22,884	19,705	16,297	17,481	7,915	7,096
October .. .	20,846	13,971	17,529	20,812	19,413	20,057	20,107	9,420	6,504
November	19,880	10,127	12,558	16,883	20,507	17,858	18,263	8,980	6,501
December . .	18,085	16,479	16,195	16,876	18,864	18,003	17,976	10,134	6,509
January	23,443	18,980	18,408	17,297	20,199	22,325	19,646	7,782	6,731
February . .	23,040	17,698	19,149	17,042	20,485	19,546	17,036	8,377	7,019
March	20,998	17,720	21,778	21,773	17,112	20,515	15,826	8,774	8,251
April	21,166	18,502	18,198	19,527	16,466	20,159	18,156	9,763	6,427
May . ..	15,846	17,088	16,866	22,146	14,943	20,484	15,047	8,630	6,908
June	13,804	17,876	14,076	26,045	13,951	18,046	13,278	8,898	6,026
July	12,892	17,865	14,577	21,354	13,430	20,343	11,761	7,740	6,070
Total	223,649	191,544	204,113	239,768	217,584	232,392	205,765	104,095	79,906

*Subject to slight revisions.



East Indian Cotton.

First Cotton Forecast, 1932-33.

This forecast is based upon reports on the condition of the cotton crop at the end of July or early August. The reports do not, as will be seen from the detailed notes below, relate to the entire cotton area of India but to only 77 per cent. of the total.

The area sown is at present estimated at 13,485,000 acres, as compared with 13,938,000 acres (revised) at the corresponding time last year, or a decrease of 3 per cent.

Weather conditions at sowing time were not quite favourable, and the present condition of the crop is, on the whole, reported to be fair.

Detailed figures for the provinces and states are as follows:—

	Acres (thousands)		
	1932–33	1931–32	1930–31
Provinces and States			
Bombay-Deccan (including Indian States)	1,254	1,376	1,342
Central Provinces and Berar	4,494	4,681	4,816
Punjab (including Indian States)	1,955	2,141	2,310
Madras	211	196	259
United Provinces (including Rampur State)	442	739	943
Burma	297	270	341
Bengal (including Indian States)	74	74	76
Bihar and Orissa	64	66	66
Assam	36	37	42
Ajmer-Merwara	10	13	14
North-west Frontier Province	16	14	16
Delhi	2	3	3
Hyderabad	2,137	2,005	1,914
Central India	941	*955	1,078
Baroda	592	367	598
Gwalior	619	619	633
Rajputana	332	371	419
Mysore	9	11	8
Total	13,485	*13,938	14,878

* Revised.

A statement showing the present estimate of area classified according to the recognized trade descriptions of cotton is given below:—

Descriptions of cotton	Acres (thousands) 1932-33	Acres (thousands) 1931-32
Oomras		
Khandesh	1,052	1,152
Central India	1,560	*1,571
Barsi and Nagar	1,617	1,459
Hyderabad-Gaorani	661	729
Berar	3,011	3,128
Central Provinces	1,483	1,553
Total	9,381	*9,595
Dholleras	121	101
Bengal-Sind :		
United Provinces	442	739
Rajputana	342	384
Sind-Punjab	1,268	1,137
Others	69	71
Total	2,121	2,631
American-Punjab	705	721
Broach†	468	266
Coompta-Dharwars	11	13
Westerns and Northerns	73	88
Cocanadas	39	29
Tinnevellies Salems Cambodias	130	97
Comillas, Burmas and other sorts	421	307
Grand total	13,485	13,938*

* Revised.

† The figures shown against this variety refer to that grown in the Baroda State only. The comparative increase is due to the receipt of more complete information from the State this year. The State reported an area of 507,000 acres under this variety in the April forecast of last year.

Improvement of Indian Cotton.

Technological Bulletin, No. 21, Series A, of July, 1932, is a valuable compilation released by the Indian Central Cotton Committee Technological Laboratory, under the direction of Dr. Nazir Ahmad, which should be in the hands of every cotton spinner. Details are given of the improved varieties of cotton which are steadily replacing the older varieties in India and in different parts of the world.

The term "Standard Indian Cottons" is applied to certain improved varieties of cotton which are steadily replacing the older varieties in different parts of India and which, at present, cover some 15 per cent. of the total area under cultivation. It is the practice at the Technological Laboratory in Bombay to subject the standard cottons of each season to a very thorough test for their fibre properties and yarn characteristics The Bulletin No 21 referred to above, includes reports which contain the detailed results of these tests on standard cottons of nine seasons (1923 32) together with agricultural details, grader's valuation reports, and spinning master's report on each cotton Extracts from the spinning master's reports on selected cottons are appended (1931 32 season's cotton in each case) —

TRADE DESCRIPTIONS OF INDIAN COTTON

COTTON	Acres (000's) 1931 2	Bales of 400 lbs (000's) 1931 2	Yield per acre (lbs) 1931 2	Counts
Bengals				
United Provinces	786	218	111	8/10's reeling or weft yarn
Rajputana	467	86	74	
Sind Punjab	1 998	398	80	
Others	74	16	86	
Total	3 325	718	86	
Broach				
Broach Ankleshwar	1 250	291	94	18 20's weft
Surat				20/22's warp
Sawginned Dharwar				20's warp
Navsari				30's warp 40's weft
Punjab American	763	173	91	20 24's warp
Sind American	61	14	92	
Dholleras	2 101	577	110	20/22's warp
Total	4 175	1 058	101	
Oomras				
Khandesh	1 221	179	59	10 12's reeling
Central India	1 822	208	46	16/20's weft
Barsi and Nagar	2 595	360	55	16/20's weft
Hyderabad Gaorani	862	115	53	26 28's warp 30 36's weft
Berar	3 139	351	45	12 14's reeling
Central Provinces				
No 1	1 449	138	38	12/16's reeling
No 2				10/12's reeling
Total	11 088	1 351	49	
Southerns				
Kumpta Dharwars	1 540	253	66	22/28's warp
Westerns and Northerns	1 862	228	49	20's warp
Cocanadas	194	35	72	20's warp
Tinnevellies	502	138	110	20's warp
Salems	193	35	73	
Cambodias	273	119	174	28/30's warp 36/40's weft
Total	4 564	808	71	
Comillas, Burmas and others	359	67	75	8/10's reeling
Grand Total	23 511	4 002	68	

Jayawant (Kumpta)—This cotton is dull creamy-white and well ginned It is fairly leafy, but soft in feel The card sliver is fairly clean, web even and nep free. Ten flat strips weigh 12 grammes. The cardroom loss is generally below 8 per cent. This cotton usually gives even 20's yarns and up to fairly even 30's. The yarns are comparatively weaker since 1929-30 but those of 1931-32 are an improvement over last season. The highest standard warp counts for which the cotton is suitable is found to be 33's.

Surat 1027 *A L F*.—This growth is white, clean and has a soft silky feel. It is well ginned and the card sliver is clean. The web is very good. Ten flat strips weigh 12 grammes. The cardroom loss lies between 7 and 8 per cent. Yarns of this cotton are very even to even in 20's and even to fairly even in 30's counts. They are inclined to be a little neppy. Highest standard warp counts, 30's.

Punjab American 4*F*.—A white cotton which shows an occasional stain. It is fairly leafy, but is well ginned and has a softish feel. The card sliver is clean, web even and nep free. Ten flat strips weigh 16.1 grammes. Yarns of 1931-32 season are slightly weaker than previous growths but are more even. Highest standard warp counts, 20's.

Punjab American 289 *F*.—A bright, white to creamy white cotton. It is a little leafy and is in a somewhat knotted and nepped condition, but has a silky feel. The card sliver is clean, web fairly neppy and cloudy. Ten flat strips weigh 23.5 grammes. The cardroom loss is generally high. This cotton has generally given neppy yarns, the worst years being 1926-27 and 1928-29. The yarns of 1930-31 showed a distinct improvement in this respect which, however, has not been maintained in the current season. Except for the neppiness of its yarns this cotton has generally given very good results among the standard Indian cottons. Highest standard warp counts, 39's.

Mollisoni (*Bengals*).—A bright white, well ginned cotton. It is fairly leafy and has a slightly rough feel. The card web is nep-free and almost even, sliver clean. Ten flat strips weigh 14.9 grammes. The cardroom loss is usually about 8 per cent though it is nearly 4 per cent higher than usual in 1931-32. Yarn breakages in the ring frame are generally few in 6's and 8's counts but fairly numerous in 10's. Highest standard warp counts, 8's.

Verum 262 (*Nagpur*).—This cotton is white and bright but slightly stained. It is fairly cleaned, well ginned and has a good feel. The card sliver is clean, web even, and nep free. Ten flat strips weighs 13.4 grammes. Yarn breakages in the ring frame are generally few in all cases except 20's. This cotton usually gives even 20's and fairly even 26's. The yarns of 1931-32 season are somewhat better in this respect than the average. Its yarns are fairly free from neppiness. Highest standard warp counts, 25's.

Verum 262 (*Akola*).—White and bright, fairly clean with a good feel. The card sliver is clean, web almost nep-free and even. Ten flat strips weigh 13.1 grammes. This cotton is generally picked in a clean condition, and gives a small blowroom loss. Highest standard warp counts, 21's.

Umri Bani.—A white to creamy-white cotton, bright and slightly stained, leafy, but with a good feel. The card web is even and nep free, the sliver a little leafy. Ten flat strips weigh 15.6 grammes. Yarn breakages in the ring frame are comparatively few, except in 24's and 30's counts. Highest standard warp counts, 27's.

Cambodia Co. 2 (*Cambodia* 440).—A clean creamy white cotton. It has a soft feel, but is in a somewhat knotted condition. The card sliver is clean; web fairly good. Ten flat strips weigh 18 grammes. This cotton usually gives even 20's and even to fairly even 30's. Highest standard warp counts, 27's.

Nandyal 14.—A white to creamy white cotton, bright and very clean. It has a good soft feel and is well ginned. Card sliver clean; web good. Ten flat strips weigh 13.7 grammes. Yarns of this cotton vary from season to season as regards evenness and, to a greater extent, neppiness. Usually they are even in 20's and even to fairly even in 30's. The yarn strength results do not show much variation, the best results having been obtained in 1929-30 and 1930-31 and the worst in 1931-32. Highest standard warp counts, 30's.

Hagari 1.—A white, very clean cotton. The card sliver is clean, web even and nep free. Ten flat strips weigh 11.4 grammes. Yarn breakages in the ring frame are generally few, except in 30's and 40's of 1931-1932. Highest standard warp counts, 30's.

Hagari 25.—A very clean cotton, of a dullish creamy white colour. It has a good soft feel. The card web is good and the sliver clean. Ten flat strips weigh 11.4 grammes. The cardroom loss is usually about 8 per cent. Yarn breakages in the ring frame are few in all cases. The yarns of this cotton are usually even in 20's and fairly even in 30's counts. Highest standard warp counts, 31's.

Karunganni C 7.—A creamy-white cotton, very clean and very bright. It has a soft and bodied feel. The card sliver is clean and the web is good. Ten flat strips weigh 13 grammes. The cardroom loss is about 8 per cent. With few exceptions yarn breakages in the ring frame are rather numerous, even in 20's counts. This cotton usually gives even 20's and even to fairly even 26's. Its yarns are usually somewhat neppy, but those from 1931-32 growth are less neppy than others. Highest standard warp counts, 21's.

The Boll-Worm in India.

THE boll-worm is the worst of the cotton pests in India, and its havoc is far greater than anything that season and climatic variations can cause, states the Indian Central Cotton Committee, Bombay, in a press communique. It is found in two varieties. There is the pink boll-worm (*Platyedra gossypiella saunders*) of grey brown colour with dark blotches and suffusions, and wings with long brown fringes, which infests the United Provinces and the Punjab, Northern Central Provinces and

Rajputana There are the spotted boll worms *Earias fabia* and *insulana*) Of these, the first one can be identified by its broad green band extending from the face to the apex of each wing, save in some cases where the green band may be absent, the whole wings being ochreous or buff being developed The other has the fore wings bright green These abound in almost all other cotton belts, but particularly in Surat, Broach and other Bombay areas The enormous preventable losses caused by them will be realized when it is pointed out that the grower would benefit to the extent of Rs 30 an acre, and in United Provinces alone this would mean an extra profit of Rs 2½ crores a year, at the comparatively low cost of about 1½ crores required for eradication of the pink boll worms In the Punjab it would mean a saving of about Rs [illegible] crores, and in Bombay areas, where its devastation is more acute, the average savings would come to about Rs 10 crores The Indian Central Cotton Committee accordingly started three schemes in these areas for the study of the best means of eradicating this pest

Surat Entomological Scheme

This scheme was started in 1923 for five years and extended by three years to study the incidence and chances of control of the spotted boll-worms It was found that the larvæ was carried over from season to season in the cotton stalks which are left in the ground after the final picking is over Experiments to protect the plants by the cage method consisted in having them covered at night with light adjustable cages of mosquito netting to prevent the moths laying eggs on them, and of surrounding the base of the plant with circular tin trenches, the grooves of which contain oil and water This did not allow any larvæ to reach the protected plants from the surrounding area, and the method was found to be most satisfactory, as the plants were kept perfectly protected from the boll-worm from the beginning to the end of growth, and at the same time exposed to the fullest light and sun during the day time, thus securing not only a normal growth but an earliness of maturity by six weeks and an increase in yield as high as 12 per cent From this it is clear that such protection cannot be available in field cultivation, and attempts to keep out the moths prove that destruction of the stalks is the only way to prevent the "carry-over" The complete extirpation would, therefore, mean that very large areas in the district would have to be cleaned up simultaneously Even then the moths would fly over into the boundary areas from surrounding tracts, but there would be enough land in the centre to show the value of this method of controlling the pest

A Thorough Clean up

The success of the plan depends on the thoroughness and quickness with which the "clean-up" is performed Generally the crop is gathered in April and sowing begins in July, and in the interval each and every stalk should be pulled up and burnt This will involve additional labour and expense, but it will be amply repaid by a much bigger yield of the succeeding crop Once the benefits are demonstrated, it is very likely that the system would spread all over the area A simple implement for pulling out the stalk has been made in Baroda costing Re 1-4-0, and it promises to be in general use in all the affected areas

PROPAGANDA WORK

Intensive propaganda had to be carried out on the area in order to find out whether the pest can be effectively controlled by the " clean up method Over 450 square miles of land in 120 villages in the Surat area have grouped together for this purpose, and demonstrations of cage plants and lantern slides were given in 40 centres, in addition to personal discussions with individual cultivators This work was started in April, 1931, and a three years' process of " clean-up " has been planned, if it is found successful, legislation will have to be introduced to declare the spotted boll worm a pest on the lines of the " Madras Agricultural Pests and Diseases Act, 1919, ' declaring the stem weevil (*Pempheres affinis*) and pink boll-worm (*Platyedra gossypiella*) as insect pests in respect of species of cotton known as *Gossypium hirsutum*, which include Cambodia and Dharwar-American cottons Such an Act if passed, would make it obligatory on cultivators to clean up their lands just after the last picking of cotton is over

SPECIAL FEATURES OF KHANDESH

An attempt was made to initiate the " clean up measures in Khandesh, but it transpired that *Bhendi* (*Hibiscus Esculentus*), which was grown along with cotton in the early part of the cotton-growing season, although it afforded protection against spotted boll-worm, seemed to assist to increase the pest as soon as the *Bhendi* plants dried up Observations are in progress to find out if it would be possible to get the *Bhendi* plant to continue to grow either by sowing as a very late variety or by sowing it late in the season

THE PINK BOLL WORM IN THE UNITED PROVINCES AND THE PUNJAB

The incidence and control of this worm were studied in two centres —United Provinces and the Punjab In the former case, a study was made of the life-history of the worm and of testing the accepted methods of controlling it under local conditions Experiments proved that by destroying the moth the grower could obtain an increased crop of about four maunds an acre, besides getting a much better price for it by reason of improved variety 'Side by side it was found out that the discoloration of the lint was due to attack by worms and also to their being crushed along with it

THE PINK BOLL WORM IN THE PUNJAB

This scheme was started in the Punjab for studying the reasons for the pest being a serious menace in the south eastern districts, while the Canal Area seemed to be almost immune to it The work has been carried on for five years, and has now been extended by another two years It was found that the source of infection lay in the seed and not in the stalk as is the case with Bombay areas, where the attack is due to a different pest (spotted boll-worm)

HEATING AND SUN DRYING AS THE REMEDIES

The study of the worm showed that the seeds were the means of carrying over the larvæ and that the remedy lay in killing the larvæ in the seed This could be done by heating the seeds to 60° C or 140 F while preserving the vitality of the seed An area of 23 000 acres was thus brought under control in one season in the Aligarh District, and it was generally accepted that the crop thus produced was the best obtained in living memory It seems that the best way of meeting the situation would be in fitting heating machines in ginning factories if the pest is to be controlled and this scheme is under consideration Its result will be of great value to the Northern Central Provinces and Central Indian States where similar conditions prevail

If the seeds are exposed in a thin layer for a day each in April and May to the direct rays of the sun it is found that the larvæ die out It is also observed that the lower temperature prevents the moth from multiplying The Northern district in the Canal Area seems in this respect to be naturally protected Propaganda work has been started to induce the cultivators in affected areas to expose the seed to the heat of the sun and we may quite reasonably expect satisfactory results in course of time through this simple and inexpensive method

---

MARKET REPORT.

Messrs Volkart Brothers, Winterthur in their market letter dated October 28 report as follows —

Weather and Crop The past week has brought most welcome rains in the districts of Broach and Kathiawar and more rain appears to be in the offing The present condition of the crop is therefore very satisfactory throughout and indications now point to a yield somewhat in excess of our estimate of September 30 1932 However the months of November and December have frequently been known to cause damage to quality and quantity through rain and this risk has still to be counted in

The crop, as reported before is moving very slowly in the northern zone owing to the very unsatisfactory return which present prices give to the producer Growing conditions seem to have favoured grade more than staple in the northern zone

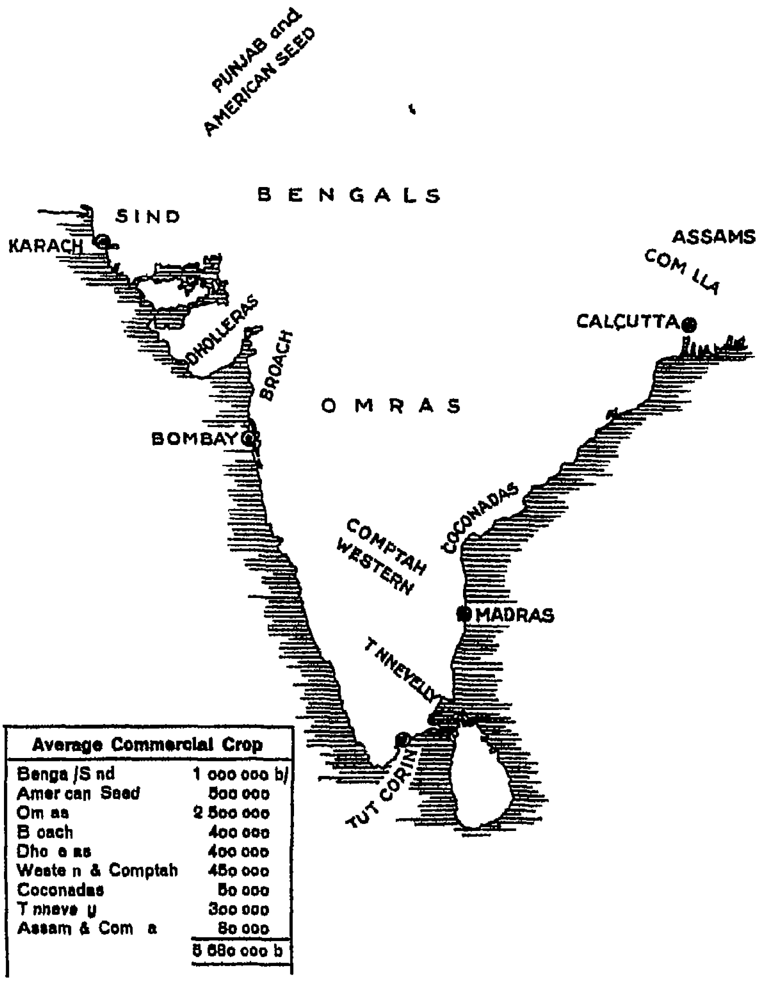
Picking has commenced in the Khandesh and Oomra districts and arrivals will commence in the first week of November

The Statistical Bureau of the Indian Government has issued a new estimate of this year s cotton acreage amounting to 18 466,000 acres against 19 654 000 last year which signifies a decrease of about 6 per cent

The Indian markets have been rather firm this week and pence prices have been even above the level assigned to them by the drop in the gold value of rupees and sterling This is probably due to purchases made in anticipation of a further decline in exchanges even among the rest The Indo American parity has become narrower again with the effect of raising the c i f Europe cost of the fully good Broach contract for April May to a point above American futures in Liverpool A considerable amount of straddling appears to have taken place upon this apparently glaring disparity These straddles are likely to be successful to some extent as with the swelling of arrivals in India a widening is very probable

However in connection with straddling between Liverpool and India the factor of Indian high protective duties on piece goods is apt to be overlooked This protective duty by raising the price which the manufacturer may ask for his products in his home market incidentally enables him to pay a higher price for indigenous cotton and thus acts against the natural parity. Besides, the short in the Broach market from these straddles is now a source of strength after the sales themselves have failed to depress that market.

A fair amount of business in cotton for shipment has taken place and new shipments have been sold at premiums caused by the depletion of reserves in Europe. Steamer sailings to the North Sea ports are less numerous than usual at this time of the year owing to the general shrinkage in international trade.



COTTON EXPORTS FROM INDIA

To all destinations from September 1 1931 to August 31 1932

	Europe	Japan	China	America	Australia etc	Total
Bombay	152 891	552 506	209 936	25	1 266	916 626
Karachi	346 815	213 270	28 535	5 325	—	593 945
Madras	18 842	1 455	2 250	—	—	22 547
Tuticorin Calicut	960	3 401	2 100	—	—	6 461
Calcutta	18 703	300	—	9 767	1 381	30 151
Marmagoa	1 694	—	—	—	—	1 694
Coconada	740	—		—	—	740
Kathiawar ports	9 774	—		—	—	9 774
	550 419	770 934	242 821	15 117	2 647	1 581 938

DISTRIBUTION OF SHIPMENTS TO EUROPE ACCORDING TO PORTS OF DESTINATION.

Exporters	Antwerp Ghent	Hamburg Bremen	Liverpool Manchester	Havre Dunkirk	Trieste	Genoa	Venice
Ralli Brothers	25,328	22,874	18,412	5,791	5,278	5,227	6,708
Volkart Brothers ..	12,179	14,849	11,167	8,571	12,735	5,510	8,830
Kilachand Devchand & Co, Ltd.	9,487	15,617	29,967	3,852	7,760	3,110	2,505
Patel Cotton Co, Ltd ..	2,255	9,762	15,247	9,122	1,663	1,510	110
Bombay Co, Ltd ..	8,985	7,894	5,009	2,299	2,457	6,649	1,300
Textile Products, Ltd ..	580	9,918	4,035	28	1,033	3,351	1,205
E. Spinner & Co. ..	6,091	3,589	3,875	-	415	1,530	110
Toyo Menka K Kaisha	175	467	11,140	870	55	770	715
Gill & Co	- -	3,893	4,765	188	565	110	275
Gosho K Kaisha ..	1,540	4,106	1,329	3,637	165		
Bhaidas Karsondas & Co.	2,570	275	-	825		1,109	735
Nippon Menka K Kaisha	28	4,629	1,345	2,555	1,605	55	220
Osman Suleman ..	4,172	330	2,835	164		1 155	110
K. M Nathoo & Co .	1,975	55	1,044	880	1,835	1,592	360
Italindia Cotton Co. ..	970	550	—	164		2,635	2,150
Sundry Shippers.. ..	4,545	19,525	10,341	4,729	1,033	3,859	5,197
Total	80,880	118,333	121,411	43,675	36,599	38,205	30,860

Exporters	Barcelona	Rotterdam	Marseilles	Naples	Scandinavia	Sundry ports	Total
Ralli Brothers	7,328	6,755	3,712	250	120	1,580	109,363
Volkart Brothers	6,790	6,025	4,678	440	110	870	92,754
Kilachand Devchand & Co, Ltd.	1,725	550	110		137	165	74,985
Patel Cotton Co., Ltd ..	320	2,200	—			50	42,269
Bombay Co., Ltd. ..	1,048	4,503		330			40,471
Textile Products, Ltd. ..	45	1,320	528			166	23,112
E. Spinner & Co ..	2,225	34	-			935	18,801
Toyo Menka K Kaisha ..	400	- -				265	14,887
Gill & Co., ...	—	2,365	-				12,161
Gosha K. Kaisha	100	550	-			215	11,912
Bhaidas Karsondas & Co.	5,270	55	-				10,839
Nippon Menka K Kaisha	—	110		--			10,517
Osman Suleman	175	—	870	1		55	9,867
K. M. Nathoo & Co. ..	1,050	—	—				8,791
Italindia Cotton Co. ..	1,175	--	-	-	-	125	7,769
Sundry Shippers .. .	9,967	605	424			1,330	61,855
Total	37,918	25,072	10,322	1,021	367	5,756	550,419

Indian imports of British textile machinery were on a much heavier scale than they were a year ago. In the month of June, India imported machinery worth £205,199; this figure represents almost half of Lancashire's total exports.

Twenty-three Bombay mills and 19 Ahmedabad mills worked night-shifts in the month of August last.

The Whole Textile Trade

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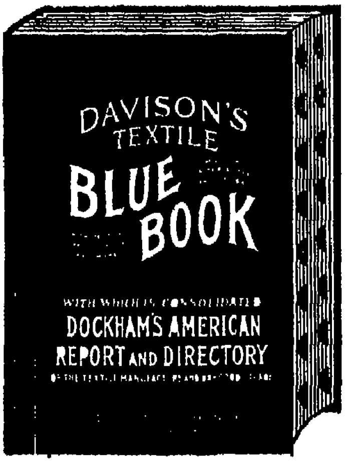

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INTERNATIONAL COTTON STATISTICS

The present tabulation is the final result of the Census of Cotton Consumption in the Cotton Spinning Mills of the World for the year ended 31st July, 1932, and of Cotton Mill Stocks on that day. It should be borne in mind that the figures published herewith relate to raw cotton only, and do not contain linters or waste cotton of any kind whatsoever.

We regret to state that no returns have been received from Russia since July, 1930, in spite of our endeavours to re-establish connection with the Russian authorities by various means. Estimates for this country have had to be made and are included in the present tabulation.

There are several instances where it has been necessary to make slight variations from our preliminary report issued on the 3rd September last, Consumption figures have been altered in Italy, Switzerland (Sundries only), and Canada (American only). The only World's Consumption figure to be altered, however, is East Indian, and this only by 1,000 bales.

Turning to the Stocks, a reduction in all varieties in the Italian estimate has caused a fall in the world's figures of 21,000 bales in all. Slight revisions in the spindleage of Great Britain, Italy, and Canada, have reduced our preliminary estimate of the Total World's Spindleage from 161,016,000, to 161,002,000.

The total **World's Cotton Mill Consumption for the YEAR ended 31st July, 1932,** compared with the same period of the previous year, is as follows :—

	31st July, 1932	31st July, 1931	Increase or Decrease over previous year
	bales	bales	bales
American Cotton ..	12,319,000	*10,908,000*	+1,411,000
East Indian Cotton ..	4,788,000	*5,863,000*	– 1,075,000
Egyptian Cotton ..	980,000	*853,000*	+ 127,000
Sundries	4,235,000	*4,864,000*	— 629,000
All kinds of Cotton ..	22,322,000	*22,488,000*	— 166,000

The total **World's Cotton Mill Stocks on 31st July, 1932,** were :—

American Cotton :

Europe ..	695,000 bales	*against*	*618,000 bales on 31st July, 1931.*
Asia	626,000 „	„	*264,000 „ „ „ „*
America ..	1,213,000 „	„	*982,000 „ „ „ „*

The total World's Mill Stocks of American Cotton on 31st July, 1932, were 2,543,000 bales, as against 1,871,000 bales in the year 1931 and 1,985,000 in 1930

East Indian Cotton :

Europe ..	153,000 bales	*against*	*362,000 bales on 31st July, 1931.*
Asia	860,000 „	„	*1,177,000 „ „ „ „*

Altogether the World's Mill Stocks of East Indian Cotton were 1,031,000 bales against 1,565,000 twelve months ago.

Egyptian Cotton :

Europe ..	165,000 bales	*against*	*142,000 bales on 31st July, 1931.*
Asia	39,000 „	„	*43,000 „ „ „ „*
America ..	23,000 „	„	*30,000 „ „ „ „*

The total World's Mill Stocks of Egyptian Cotton were 228,000 bales against 217,000 bales twelve months ago.

Sundry Cottons:

Europe	314,000 bales *against*	*315,000 bales on 31st July, 1931.*
Asia	232,000 „ „	*202,000* „ „ „ „
America	70,000 „ „	*100,000* „ „ „ „

The **Total World's Mill Stocks** of all kinds of cotton on July 31st, 1932, were 4,462,000 bales against 4,313,000 bales on July 31st, 1931.

World's Spindles:

The total estimated number of spinning spindles existing in the world have decreased from 162,070,000 on January 31st last to 161,002,000 on July 31st, 1932.

SHORT-TIME TABLE.

The spindle-hours stopped by the mills reporting, when worked out over the whole industry of each country, indicate the following stoppages in weeks of 48 hours, for the industries in the countries tabulated below:—

	Half-year ending July 31st, 1932	Half-year ending Jan 31st, 1932
Great Britain	10·32*	10·51
Germany	6·16	5·74
France	11·19‡	7·79
Italy	7·77	7·45
Czecho-Slovakia	10·01	7·31
Belgium	9·20	7·07
Poland	3·18	4·19
Switzerland	5·09	4·89
Holland	8·13‡	4·89‡
Austria	7·32	7·81
Sweden	1·25	0·88
Portugal	—	—
Finland	3·17	3·88
Hungary	0·58	0·50
Denmark	0·84	1·74
Norway	3·85	7·71‡
Japan	15·57†	14·42†
China	15·95**	5.67**
Canada	8·63	—
Mexico	6·86	4·62
Brazil	2·18	2·03

U S A. In July, 1932, 19,758,000 spindles were active out of a total of 31,709,000

* The stoppage of the American Section amounted to 11·78 (*12·37*) weeks, and that of the Egyptian Section to 7·78 (*7·17*) weeks of 48 hours. There were 90 (*98*) firms with 4,226,401 (*5,707,996*) spindles in the American Section completely stopped during the period under review. In the Egyptian Section 7 (*11*) firms with 391,582 (*424,312*) spindles were completely stopped during the six months. Firms with 431,510 (*483,528*) spindles have closed down indefinitely *during* the period under review.

† This figure represents working weeks of 48 hours. The general working week in Japan is 120 hours. Calculated in Japanese working weeks the stoppage is equal to 6·23 (*5·77*) weeks for the last six months under review.

** The working week in China is 132 hours. Calculated in Chinese working weeks the stoppage is equal to 5·80 (*2·06*) weeks for the period under review.

‡ Inclusive of strike or lockout.

(Figures in brackets and in *italic* refer to previous six months.)

Estimated TOTAL WORLD'S COTTON MILL CON- with previous figures for comparison, on basis of Spinners'

	COUNTRIES	IN THOUSANDS OF ACTUAL BALES (regardless of weight)							
		AMERICAN				EAST INDIAN			
		Half-year ending				Half year ending			
		July 31 1932	Jan 31 1932	July 31 1931	July 31 1930	July 31 1932	Jan 31 1932	July 31 1931	July 31 1930
	EUROPE :—								
(1)	Great Britain	733	609	498	594	53	130	121	88
(2)	Germany	426	437	355	455	48	81	92	127
(3)	France	263	308	339	348	62	90	103	124
(4)	Russia* . ..	—	—	—	52	25	30	53	61
(5)	Italy	300	259	236	309	50	94	119	128
(6)	Czecho-Slovakia ..	127	139	127	150	11	23	32	53
(7)	Belgium	68	77	66	87	35	62	70	91
(8)	Spain	160	125	118	122	21	30	42	16
(9)	Poland	87	79	84	86	4	7	9	12
(10)	Switzerland .	21	20	19	22	3	4	5	5
(11)	Holland . .	55	67	72	76	10	14	17	22
(12)	Austria . .	40	37	31	35	4	10	11	15
(13)	Sweden . .	51	55	34	46	1	1	1	1
(14)	Portugal . .	28	15	23	26	--	—		2
(15)	Finland	15	16	14	14	—	—		
(16)	Hungary . ..	15	26	21	22	2	5	5	3
(17)	Denmark	11	12	11	10	—	—	—	
(18)	Norway	5	4	3	4	—	--	—	
	Europe Total ..	2,400	2,285	2,051	2,458	829	581	680	778
	ASIA :								
(1)	India	121	69	40	18	1,121	1,175	1,140	1,156
(2)	Japan	933	630	505	519	898	719	745	827
(3)	China	451	432	198	162	111	310	242	264
	Asia Total ..	1,505	1,131	743	699	1,630	2,204	2,133	2,217
	AMERICA :								
(1)	U.S.A.	2,179	2,568	2,714	2,654	9	12	21	30
(2)	Canada	84	104	101	96	—			
(3)	Mexico	—	3	--	—	—	--		
(4)	Brazil	--	—	—	—	-	—		
	America Total .	2,268	2,675	2,815	2,750	9	12	21	30
	Sundries .. .	34	26	21	33	8	15	16	47
	HALF-YEAR'S TOTAL ..	6,202	6,117	5,630	5,940	1,976	2,812	2,850	3,102

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* No returns received from Russia, and the figures for this country have been estimated

SUMPTION for the Half-year ending 31st July, 1932, returns made to the International Cotton Federation.

IN THOUSANDS OF ACTUAL BALES
(regardless of weight)

EGYPTIAN				SUNDRIES				TOTAL				
Half-year ending				Half-year ending				Half-year ending				
July 31 1932	Jan 31 1932	July 31 1931	July 31 1930	**July 31 1932**	Jan 31 1932	July 31 1931	July 31 1930	**July 31 1932**	Jan 31 1932	July 31 1931	July 31 1930	
149	152	129	134	**239**	321	240	234	**1,174**	1,212	988	1,050	*(1)*
50	44	40	40	**49**	61	43	25	**573**	623	530	647	*(2)*
44	60	55	53	**27**	38	30	57	**396**	496	527	582	*(3)*
35	10	35	25	**740**	650	750	845	**800**	720	838	983	*(4)*
32	30	31	22	**15**	13	9	9	**397**	396	395	468	*(5)*
11	13	12	7	**10**	10	9	7	**159**	185	180	217	*(6)*
2	3	4	3	**22**	31	28	41	**127**	176	168	222	*(7)*
25	24	19	19	**11**	7	15	17	**217**	186	194	204	*(8)*
8	4	4	5	**3**	2	5	4	**102**	92	102	107	*(9)*
16	18	19	21	**2**	3	2	1	**42**	45	45	49	*(10)*
—	—	—	—	**4**	4	8	5	**69**	85	97	103	*(11)*
3	3	2	2	**5**	2	2	2	**52**	52	46	54	*(12)*
1	1	1	1	—	—	—	—	**53**	57	36	48	*(13)*
2	—	—	—	**9**	4	16	16	**34**	19	39	44	*(14)*
—	—	—	—	—	1	1	—	**15**	17	15	14	*(15)*
10	1	1	—	**1**	1	1	2	**28**	33	28	27	*(16)*
—	—	—	—	**1**	1	1	1	**12**	13	12	11	*(17)*
—	—	—	—	—	—	—	—	**5**	4	3	4	*(18)*
388	393	352	332	**1,138**	1,152	1,160	1,266	**4,255**	4,411	4,243	4,834	
37	26	35	9	**88**	63	52	72	**1,367**	1,333	1,273	1,255	*(1)*
26	23	21	20	**16**	24	53	87	**1,373**	1,396	1,324	1,453	*(2)*
8	5	5	2	**476**	466	704	776	**1,041**	1,213	1,149	1,204	*(3)*
66	51	61	31	**580**	553	809	935	**3,781**	3,942	3,746	3,912	
27	26	35	61	**11**	15	22	26	**2,226**	2,621	2,792	2,771	*(1)*
8	5	5	4	—	—	—	—	**87**	109	106	100	*(2)*
—	—	—	—	**59**	98	72	89	**59**	101	72	89	*(3)*
—	—	—	—	**228**	242	216	180	**228**	242	216	180	*(4)*
30	31	40	65	**293**	355	310	295	**2,595**	3,073	3,186	3,140	
9	9	6	7	**110**	54	106	34	**161**	104	149	121	
493	487	469	435	**2,121**	2,114	2,385	530	**10,792**	11,530	11,324	12,007	

Estimated TOTAL WORLD'S COTTON MILL STOCKS comparison on basis of Spinners' returns

IN THOUSANDS OF ACTUAL BALES (regardless of weight)

	COUNTRIES	AMERICAN Half-year ending July 31 1932	AMERICAN Half-year ending Jan 31 1932	AMERICAN Half-year ending July 31 1931	AMERICAN Half-year ending July 31 1930	EAST INDIAN Half-year ending July 31 1932	EAST INDIAN Half-year ending Jan 31 1932	EAST INDIAN Half-year ending July 31 1931	EAST INDIAN Half-year ending July 31 1930
	EUROPE:								
(1)	Great Britain ..	68	67	53	57	12	12	35	38
(2)	Germany .. .	129	136	72	94	38	27	40	59
(3)	France	182	134	173	150	36	62	141	118
(4)	Russia†	—	—	—	16	5	5	6	7
(5)	Italy	149	163	120	132	19	31	50	71
(6)	Czecho-Slovakia .	84	50	29	30	8	6	14	25
(7)	Belgium	48	58	44	37	25	33	42	50
(8)	Spain	22	26	16	17	8	3	6	10
(9)	Poland	14	8	7	12	1	1	2	3
(10)	Switzerland ..	17	18	14	11	8	3	7	7
(11)	Holland	41	44	35	25	11	12	14	17
(12)	Austria	14	11	7	8	1	2	3	4
(13)	Sweden	18	22	26	18	—	—	1	1
(14)	Portugal	5	2	4	7	—	—	—	1
(15)	Finland	4	4	4	4	—	—		
(16)	Hungary . ..	8	6	5	5	1	1	1	1
(17)	Denmark . ..	5	4	5	4	—	—	--	
(18)	Norway	2	3	4	2	—	—	-	-
	Europe Total ..	695	756	618	629	158	198	362	418
	ASIA:								
(1)	India	102	32	35	14	692	609	855	809
(2)	Japan	370	231	163	175	184	103	241	254
(3)	China	154	107	66	58	34	52	81	129
	Asia Total ..	626	370	264	247	860	704	1,177	1,192
	AMERICA:								
(1)	U.S.A.	1,164	1,582	921	1,048	15	17	17	21
(2)	Canada	49	62	61	50	—	--	-	-
(3)	Mexico	—	—	—	—	—	—	- -	-
(4)	Brazil	—	—	—	—	—	—	-	--
	America Total ..	1,213	1,644	982	1,098	15	17	17	21
	Sundries	9	5	7	11	3	5	9	36
	HALF-YEAR'S TOTAL ..	2,548	2,775	1,871	1,985	1,031	984	1,565	1,667

† No returns from Russia. Figures for this country

on 31st July, 1932, with previous figures for made to the International Cotton Federation.

IN THOUSANDS OF ACTUAL BALES
(regardless of weight)

EGYPTIAN				SUNDRIES				TOTAL				
Half year ending				Half year ending				Half year ending				
July 31 1932	Jan 31 1932	July 31 1931	July 31 1930	July 31 1932	Jan 31 1932	July 31 1931	July 31 1930	July 31 1932	Jan 31 1932	July 31 1931	July 31 1930	
37	37	35	35	50	70	51	57	162	186	174	187	(1)
20	19	15	13	18	13	14	13	195	195	141	179	(2)
30	25	36	32	16	20	26	33	214	241	376	333	(3)
10	15	15	35	200	190	190	74	215	210	211	132	(4)
29	20	13	9	7	8	7	4	204	222	190	216	(5)
3	3	4	4	2	3	2	2	42	62	49	61	(6)
4	4	2	1	16	11	15	10	88	106	103	104	(7)
8	8	6	7	2	2	2	4	35	39	30	38	(8)
3	2	1	3	—	—	1	—	18	11	11	18	(9)
13	15	14	12	2	3	3	3	35	39	38	33	(10)
	—	—	—	3	2	2	1	55	58	51	43	(11)
1	2	1	1	1	1	1	—	17	16	12	13	(12)
1	1	—	1	—	—	—	—	19	23	27	20	(13)
1	—	—	—	1	1	1	2	7	3	5	10	(14)
—	—	—	—	—	—	—	—	4	4	4	4	(15)
5	—	—	—	—	1	—	—	9	8	6	6	(16)
—	—	—	—	1	—	—	—	6	4	5	4	(17)
—	—	—	—	—	—	—	—	2	3	4	2	(18)
165	151	142	153	314	325	315	203	1,827	1 430	1 437	1 403	
19	19	27	5	59	33	41	32	872	693	958	860	(1)
17	15	12	9	9	3	9	21	530	352	425	459	(2)
3	1	4	1	164	127	152	228	355	287	303	416	(3)
39	35	43	15	232	163	202	281	1,757	1 332	1 686	1 735	
21	19	28	61	12	13	19	23	1,212	1 631	985	1 156	(1)
2	2	2	1	—	—	—	—	51	64	63	51	(2)
—	—	—	—	24	61	33	26	24	61	33	26	(3)
—	—	—	—	34	57	48	43	34	57	48	43	(4)
23	21	30	65	70	131	100	92	1,321	1 813	1 129	1 276	
1	5	2	4	44	18	43	33	57	33	61	84	
228	212	217	237	660	637	660	609	4,462	4 608	4 313	4 498	

ESTIMATED TOTAL WORLD'S COTTON
years 31st July, 1932, and 31st January,
the International

	COUNTRIES	TOTAL ESTIMATED NUMBER OF SPINNING SPINDLES		MULE SPINDLES	
		Half-year ended		Half-year ended	
		July 31, 1932	Jan. 31, 1932	July 31, 1932	Jan. 31, 1932
	EUROPE:				
(*1*)	Great Britain ..	51,891	52,776	39,133	40,052
(*2*)	Germany . ..	10,233	10,317	3,933	4,015
(*3*)	France	10,144	10,310	3,541	3,576
(*4*)	Russia† . ..	9,200	9,000	2,187	2,187
(*5*)	Italy	5,384	5,407	580	590
(*6*)	Czecho-Slovakia ..	3,622	3,628	1,594	1,595
(*7*)	Belgium	2,156	2,161	421	421
(*8*)	Spain	2,070	2,070	431	431
(*9*)	Poland . ..	1,706	1,493	444	413
(*10*)	Switzerland . ..	1,346	1,366	513	552
(*11*)	Holland	1,213	1,211	259	258
(*12*)	Austria	767	764	287	245
(*13*)	Sweden	596	593	36	50
(*14*)	Portugal	453	453	143	143
(*15*)	Finland	263	262	46	45
(*16*)	Hungary	217	214	44	44
(*17*)	Denmark	100	98	-	-
(*18*)	Norway	56	56	10	11
	Total	101,417	102,182	53,602	54,628
	ASIA:				
(*1*)	India	9,312	9,312	803	803
(*2*)	Japan	7,798	7,572	35	37
(*3*)	China	4,285	4,228		..
	Total	21,395	21,112	838	840
	AMERICA:				
(*1*)	U.S.A.*	31,709	32,290	1,166	1,166
(*2*)	Canada	1,245	1,271	129	180
(*3*)	Mexico	830	825	7	7
(*4*)	Brazil	2,690	2,690	3	3
	Total	36,474	37,076	1,305	1,356
	Sundries ..	1,716	1,700	160	179
	Grand Total ..	161,002	162,070	55,905	57,003

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* U.S.A.—The division between mule and ring and the number of spindles on Egyptian is only approximate. In July, 1932, 19,758,000 spindles were active, and in January, 1932, 25,014,000 spindles.

† No return received from Russia. Figures for this country are estimated.

SPINNING SPINDLES (000's omitted) for the half-1932, on basis of returns made to Cotton Federation.

RING SPINDLES		SPINNING SPINDLES EGYPTIAN COTTON		SPINDLES IN COURSE OF ERECTION		
Half year ended		Half year ended		Half year ended		
July 31 1932	Jan 31 1932	July 31 1932	Jan 31 1932	July 31 1932	Jan 31 1932	
12,708	12 724	16,720	17 186	11	20	*(1)*
6,300	6 302	1,239	1 267	3	30	*(2)*
6,603	6 734	1,829	2 480	1	3	*(3)*
7,013	6 813	225	225	?	200	*(4)*
4,804	4 817	650	600			*(5)*
2,028	2 033	408	431			*(6)*
1,735	1 743	48	52	1	4	*(7)*
1,639	1 639	130	130			*(8)*
1,262	1 080	273	232			*(9)*
833	814	684	786		1	*(10)*
954	953		—			*(11)*
530	519	60	54		2	*(12)*
560	543	28	22	6		*(13)*
810	310	20	2		—	*(14)*
217	217	11	11	—	1	*(15)*
178	170	55	17	1	2	*(16)*
100	98				—	*(17)*
46	45	—	—	2	—	*(18)*
47,815	47 554	22,380	23 495	25	263	
8,509	8 509	416	561	65	29	*(1)*
7,763	7 535	199	650	167	168	*(2)*
4,285	4 228	—	—	—	—	*(3)*
20,557	20 272	615	1 211	232	197	
30,543	31 124	1,000	1 000	?	?	*(1)*
1,116	1 091	44	43	—	—	*(2)*
823	818	2	—	2	—	*(3)*
2,687	2 687	—	—	5	—	*(4)*
35,169	35 720	1,046	1 043	7	—	
1,556	1 521	148	108	—	1	
105,097	105 067	24,189	25 857	264	461	

TOTAL WORLD.

Date	Total Estimated Number of Spinning Spindles existing in world	ESTIMATED MILL STOCKS—In thousands of ACTUAL BALES (000's omitted) "INVISIBLE" SUPPLY					Per 1,000 Spindles Total, *all* kinds of Cotton
		AMERICAN	EAST INDIAN	EGYPTIAN	SUNDRIES	TOTAL	Bales
Feb. 1, 1932	162,070,000	2,775	984	212	637	4,608	28·43
„ **1931**	163,571,000	2,427	1,212	202	715	4,586	28·04
„ **1930**	165,143,000	2,742	1,173	224	792	4,931	29·86
„ **1929**	165,104,000	2,958	1,216	182	938	5,294	32·06
„ **1928**	164,979,000	2,867	969	183	863	4,882	29·59
„ **1927**	164,616,000	2,982	829	173	771	4,755	28·88
„ **1926**	162,972,000	2,862	915	200	671	4,648	28·52
„ **1925**	159,901,000	2,369	738	197	655	3,959	24·76
„ **1924**	158,023,000	2,369	1,030	221	468	4,088	25·87
Mar. 1, 1913	142,180,000	3,448	716	279	973	5,416	38·09
Aug. 1, 1932	161,002,000	2,543	1,031	228	660	4,462	27·71
„ **1931**	162,278,000	1,871	1,565	217	660	4,313	26·58
„ **1930**	164,108,000	1,985	1,667	237	609	4,498	27·41
„ **1929**	164,211,000	2,129	1,761	228	715	4,863	29·61
„ **1928**	165,103,000	2,112	1,728	170	777	4,787	28·99
„ **1927**	164,597,000	3,056	1,515	210	626	5,407	32·85
„ **1926**	163,723,000	1,969	1,589	201	739	4,498	27·47
„ **1925**	161,363,000	1,833	1,599	181	654	4,267	26·44
„ **1924**	158,773,000	1,327	1,592	188	467	3,574	22·51
„ **1923**	157,075,000	1,693	1,623	220	396	3,932	25·03
Sept. 1, 1913	143,449,000	1,655	1,405	273	744	4,077	28·42

ESTIMATED COTTON MILL CONSUMPTION—In thousands of ACTUAL BALES (000's omitted)

Half-year ending													
July 31, 1932	161,002,000	6202	*12319*	1976	*4788*	493	*980*	2121	*4235*	10792	*22322*	67·03	*138·17*
Jan. 31, 1932	162,070,000	6117		2812		487		2114		11530		71·14	
July 31, 1931	162,278,000	5630	*10908*	2850	*5863*	459	*853*	2385	*4864*	11324	*22488*	69·75	*138·00*
Jan. 31, 1931	163,571,000	5278		3013		394		2479		11164		68·25	
July 31, 1930	164,108,000	5940	*13023*	3102	*6087*	435	*937*	2530	*5162*	12007	*25209*	73·16	*153·10*
Jan. 31, 1930	165,143,000	7083		2985		502		2632		13202		79·94	
July 31, 1929	164,211,000	7463	*15076*	2604	*5178*	492	*989*	2455	*4639*	13014	*25882*	79·25	*157·19*
Jan. 31, 1929	165,104,000	7613		2574		497		2184		12868		77·94	
July 31, 1928	165,103,000	7181	*15407*	2220	*4523*	467	*956*	2685	*4654*	12553	*25540*	76·03	*154·75*
Jan. 31, 1928	164,979,000	8226		2303		489		1969		12987		78·72	
July 31, 1927	164,597,000	8357	*15780*	2378	*5196*	506	*993*	2171	*4172*	13412	*26141*	81·48	*158·80*
Jan. 31, 1927	164,616,000	7423		2818		487		2001		12729		77·32	
July 31, 1926	163,723,000	6756	*13730*	2787	*5572*	477	*921*	2323	*4458*	12343	*24681*	75·39	*151·10*
Jan. 31, 1926	162,972,000	6974		2785		444		2135		12338		75·71	
July 31, 1925	161,363,000	7049	*13256*	2789	*5521*	470	*970*	1818	*3547*	12126	*23294*	75·15	*144·99*
Jan. 31, 1925	159,904,000	6207		2732		500		1729		11168		69·84	
Year ending Aug. 31, 1913	143,449,000	14630		3997		946		3447		23000		160·34	

SPECIFICATION OF PART OF THE COTTON RETURNED AS "**SUNDRIES**" (IN ACTUAL BALES)

Six Months ending July 31st, 1932, estimated from Actual Returns.

CONSUMPTION

Country	Peruvian	Brazilian	Argentine	West Indian	Mexican	Turkish	Russian	Mesopotamian	Sudan	East African	West African	South African	Australian	Chinese	Others		Total
Great Britain ..	46,406	15,966	10,712	8,705	2,414	7,976	60,264	1,542	52,035	11,536	17,288	3,461	—	—	896	.. ..	239.201
Germany ..	12,369	638	3,982	1,195	487	3,092	—	844	141	213	25,558	631	—	33	12	. .	48,695
France	2,482	798	452	221	—	3,426	—	—	3,418	—	7,327	—	—	—	8,695	. ..	26,819
Italy	175	—	1,545	—	—	8 824	1,235	55	—	2,245	—	—	—	—	464	.. .	14,543
Belgium ..	—	33	—	—	—	22	—	—	44	—	20,016*	—	—	—	1,738	..	21 853
Switzerland ..	726	—	—	—	—	424	—	—	224	494	398	35	—	—	85	. .	2,386
Poland	1,847	—	—	58	—	1,127	—	—	—	5	—	—	—	—	—	. .	3,037
Holland ..	121	203	89	—	—	—	—	—	—	1,162	2,689	59	—	—	—	..	4,323
Czecho-Slovakia	1,193	10	810	—	—	522	—	—	56	48	7,264	—	—	—	1,055	.. ..	10,458
Austria ..	334	303	114	—	78	341	—	—	—	—	3,838	—	—	—	—	.. .	5,008
China	—	—	—	—	—	—	—	—	—	—	—	—	—	475,732	458	.. .	476,190
Brazil	—	223,000	—	—	—	—	—	—	—	—	—	—	—	—	—	. .	223,000
Mexico	—	—	—	—	59,000	—	—	—	—	—	—	—	—	—	—	. .	59,000
Japan	—	—	—	—	—	—	—	—	—	—	114	—	—	1,023	82 9,058 6,029	Saigon & Annam Korea Others	16,306
India	2	—	—	1	221	—	37	—	4,188	74,814	1,303	7,209	—	—	472	.. ..	88,247
Total ..	65,655	240,951	17,204	10,180	62.200	25,754	61,536	1,941	60,106	90,517	85.795	11,395	—	476,788	29,044	.. ..	1,239,066

STOCKS

Country	Peruvian	Brazilian	Argentine	West Indian	Mexican	Turkish	Russian	Mesopotamian	Sudan	East African	West African	South African	Australian	Chinese	Others		Total
Great Britain ..	8,864	2,908	1,901	6,488	221	981	1,924	421	23,663	756	1,427	257	—	—	391	.. ..	50,202
Germany ..	3,179	179	1,178	1,085	167	1,089	—	62	65	113	5,310	226	—	160	46	.. ..	12,809
France	1,709	456	929	111	—	1,463	—	—	3,935	—	3,666	—	—	—	4,082	.. ..	16,351
Italy	91	—	427	—	—	3,623	359	—	—	2,210	—	—	—	—	268	. ..	6,978
Belgium ..	—	30	—	—	—	—	—	—	95	—	9,541*	—	—	—	6,686	..	16,352
Switzerland ..	212	—	—	—	—	426	—	—	429	748	77	50	—	—	50	.. ..	1,992
Holland ..	229	124	—	—	—	—	—	—	—	405	2,094	47	—	—	—	.. .	2 899
Czecho-Slovakia	662	—	82	—	—	254	—	—	4	30	254	—	—	—	619	.. ..	1,905
Austria ..	57	48	37	—	1	10	—	—	—	—	759	—	—	—	—	. ..	912
China	—	—	—	—	—	—	—	—	—	—	—	—	—	164,245	18	.. ..	164,263
Brazil	—	34,000	—	—	—	—	—	—	—	—	—	—	—	—	—	. ..	34,000
Mexico	—	—	—	—	24,000	—	—	—	—	—	—	—	—	—	—	..	24,000
India	—	—	—	11	36	—	6	—	7,468	42,895	2,612	4,894	—	—	1,250	. ..	59,181
Total ..	15,003	37,745	4,654	7,645	24,425	7,846	2,289	483	35,659	47,157	25,740	5,474	—	164,405	13,419	. ..	391 844

* Belgian Congo.

150

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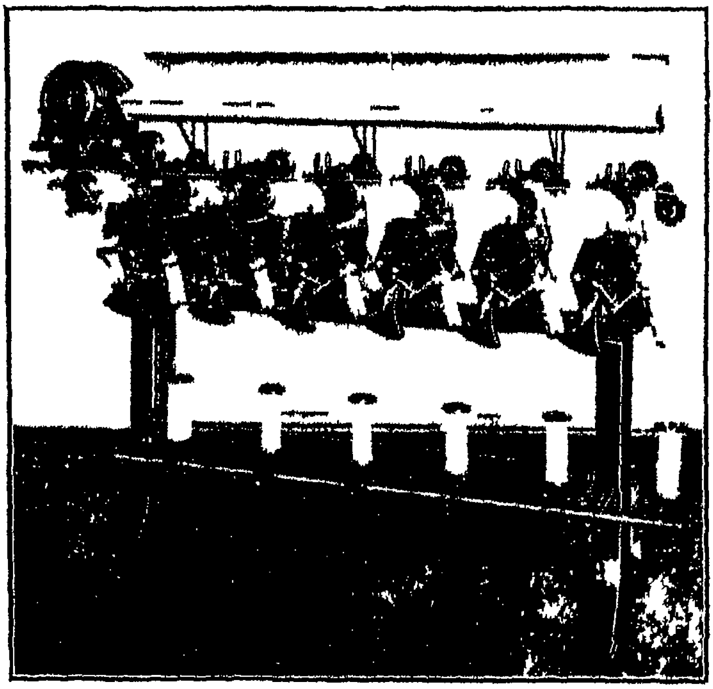

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Nº 150

This machine is built on the model of the No 50 Machine but with heavier fittings and for a wider range of work It is especially adapted for handling ply yarns

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The Anti-Crease Process.

In view of the great interest shown by the trade in the announcement that a creaseless finish had been discovered for cotton goods Messrs Tootal Broadhurst Lee Co Ltd have now issued a memorandum giving some technical details of the patent By means of the process cotton and linen are made more wool like in this respect and rayon approximates more closely to silk Although the word creaseless has appeared in the Press this is not claimed by the company as completely creaseless materials would not have the requisite textile properties The new property is better described as a combination of resistance to and recovery from creasing The process is based on the incorporation of synthetic resin in the textile material and is a final process following on bleaching, dyeing or printing

The impregnation of fabrics with synthetic resin solutions is not new as many laminated products have been made from textile materials and synthetic resins but in these cases the resin is distributed substantially on or between the yarns and the hairs whereas in the new process the material is within the fibre The difference is obvious, if we consider a rubber hose pipe reinforced with metal of which two varieties are well known to readers In one case the metal is within the rubber, which is flexible and feels soft, whereas when the rubber is surrounded by the metal the pipe loses its rubber-like character Similarly, when cotton or rayon is covered with resin it becomes stiff and papery, but if the resin is actually within the fibre the textile properties are preserved and a high degree of resistance to and recovery from crushing is conferred on the material The amount of resin employed expressed as an increase in weight on the original material is not critical, 15 per cent being a good average figure

RESINIFICATION OF THE FABRIC

The fabrics are impregnated by methods usually employed in finishing works, the condensation product at this stage being in aqueous solution The low temperature drying follows—below 100°C The final stage consists in polymerizing the condensation product to the resin stage by a modification of the known methods of resinification Any uncombined matter may be removed by the washing process which is fairly generally one of the last finishing operations.

As far as the anti-crease property is concerned, the result is obvious; there are, however, two main methods of measuring the effect produced. Both of these consist in folding a small piece of cloth 4 cm. × 1 cm. in half and allowing it to remain under a substantial weight for a definite period of time, after which it is placed by means of forceps either on a wire or upon a surface of mercury, and allowed to remain for a short definite period of time to "recover." The distance between the extremities is a measure of recovery. The following figures illustrate typical results which have been obtained by examining pieces of material treated at Messrs. Tootal's works. The size of the test piece is 4 cm. × 1 cm.:—

	Untreated		Treated	
	Warp	Weft	Warp	Weft
1. Cotton warp, viscose weft	1·7	2·2	3·3	3·3
	1·5	1·9	2·8	3·7
	1·7	1·3	2·9	3·8
2. All-spun viscose material	2·4	2·6	3·3	3·1
3. Viscose-cotton mixture	1·2	1·2	3·3	3·1
4. All-viscose crêpe georgette	1·1	2·0	2·8	3·0

The above figures compare very favourably with woollen or silk fabrics of similar construction. In the case of rayon of the regenerated cellulose type, a marked increase in both wet and dry strength is obtained, the former being of the utmost technical importance. At the same time, the extensibility of the rayon is reduced, which is also a technical improvement. Typical results are as follows:—

	Dry		Wet	
	Warp	Weft	Warp	Weft
1. All-spun viscose:				
Untreated	49	59	19	28
Treated	66	97	37	57
2. Viscose voile:				
Untreated	24·6	21·5	*	*
Treated	33·0	23·8	22	16·8

* = less than 5 lbs.

Extension at break.

	Samples		
	A	B	C
Viscose filament weft:	per cent	per cent	per cent.
Untreated	36	37	35
Treated	19	22	25

Slipping. In many fabrics containing rayon, warp and weft tend to slide on to one another, a defect frequently referred to as slipping. This, too, is greatly improved by means of the anti-crease process.

Shrinkage. Laundry shrinkage is considerably reduced, typical measurements being as under:—

Percentage Shrinkage of Viscose.

	A	B	C	D
Untreated	6·1	3·5	3·0	1·2
Treated	1·5	1·4	0·5	0·6

The testing of knitted goods cannot be effected in the same manner as woven material, but the process offers great advantages for knitted rayons of the viscose type.

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ADVANTAGES WITH KNITTED RAYONS

One of the main defects of knitted viscose material is that the handle is much nearer to that of cotton than to real silk, as the latter has a much smoother outline than viscose. The known defects of viscose are in some cases exaggerated by the knitted construction, that is, the extensibility both wet and dry results in the deformation of the garment and for this reason knit viscose material must be washed and dried very carefully. If hung up in the ordinary manner the garment will extend very appreciably in length. This is not the case with silk. The edges of material such as scarves and the hems of garments, show a pronounced tendency to roll, particularly when wet, and the ironing and finishing of such material is a matter of some difficulty. A further disadvantage in connection with the extensibility lies in the ballooning and other deformations formed by tension, i.e. elbow, knee, etc., even when dry. In addition to these, there is the well known disadvantage of poor strength particularly when wet. Viscose knitted material, although showing less susceptibility to creasing than corresponding woven goods, marks readily under heavy pressure.

SUMMARY OF THE PROCESS

The technical advantages of the process may be summed up as follows:—

(1) Woven and knitted fabrics of cellulose material can be made much more nearly like wool or silk in their resistance to and recovery from creasing, without detracting from their draping qualities or handle.

(2) The dry strength of regenerated cellulose is increased.

(3) The wet strength of regenerated cellulose is greatly increased.

(4) The process increases the weight of the material by an average of 15 per cent. Experience shows that in some cases 10 per cent or more may be taken from the fabric and if the anti-crease process is applied a cloth having similar cover to the original unreduced cloth will result, together with the added advantages of the process.

(5) The tendency to slip is reduced.

(6) The laundry shrinkage is reduced.

(7) The extensibility of rayon material is greatly reduced, and this obviates many of the forms of distortion to which rayon fabrics are notoriously liable.

(8) In the case of fabrics composed of spun viscose, the individual cut fibres are more firmly held as a result of the anti-crease process.

A particular advantage of the increase in both wet and dry strength lies in the fact that weak rayon fabrics of voile character can be made more satisfactory as merchantable articles and that an increase in wet strength renders all anti-crease rayons less susceptible to damage in the laundry.

We understand that the cost of the process in the case of some cloths works out at approximately 2½d a yd and that it has already been applied commercially to voiles

TEXTILE RESEARCH IN U.S S R

A brief account of the Russian NIII Textile Research Institute is given in a recent issue of *Melliand Textile Berichte*, which states that the Institute was established at Moscow in 1927 It is housed in three buildings and has now extensive equipment One building has a volume of 28,000 cubic metres, another 53,577 cubic metres, while a third building not yet completed is intended for cotton industry research

The Institute concerns itself with all textile sections, but has departments for bast fibres, cotton, silk and rayon wool, knitted fabrics These have specialized technical laboratories, and are equipped with experimental plants on a semi commercial scale Experiments can be carried out on a commercial scale at the factories, for which purpose investigators are delegated to the plants The Institute works with the persons in the factory laboratories, for which it also organizes conferences

Work on raw materials forms a large proportion of the activities, including selection of cotton and flax strains for yield, etc, the utilization of industrial wastes, and a search for new raw materials Mentioned amongst the latter are rabbit, ox, reindeer, and other hair, "boiled" flax cotton substitute, cotton from unopened unripe cotton bolls, "cottonite," fine needle wool substitute, staple artificial fibre, and bast fibre cotton substitutes The technical investigations mentioned cover all those questions which are being considered in the world generally—economical flax extraction from the straw, high drafts in cotton spinning tests on the Shirley and ordinary cotton cards combing of cheaper wools, and use of wool substitutes, etc

TAKER-IN SPEEDS AND THEIR EFFECT ON YARN.

An investigation of the effects of different taker-in speeds on (*a*) waste extraction at the various parts of the card, (*b*) sliver and yarn properties, and (*c*) expense of treatment, is described by Mr H Spibey, M Sc, of the Manchester College of Technology, in the current "J Tex Inst" (xxiii, 9)

The cotton used was Sakellaridis (Egyptian), with a mean fibre length of 22 2 mm (0 88 in), and a most frequent length of 30 0 mm (1 17 in) Throughout the investigations the only factor subject to alteration was the speed of the taker-in, for which ten speeds were chosen, giving approximately uniform increases within the limits of 286 and 845 r p m The slivers resulting from each speed were tested for regularity and spun into 40's ring twist for yarn strength and regularity determinations The full details of the experiments are given in the paper, of which the following is an abstract —

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In order to ensure that the carding was taking place under normal conditions after stripping the cylinder the machine was allowed to run until 10 flats had passed a given point on the flexible bend. The card was then stopped, the flats put out of gear and all fly, etc., removed. The machine was restarted and allowed to operate until 30 flats had passed the given point on the bend. The flat strips, taker-in fly and sliver produced during this time were weighed, as also was the cylinder strip made during the movement of the whole 40 flats. The taker-in pulley was then changed and the above operations repeated.

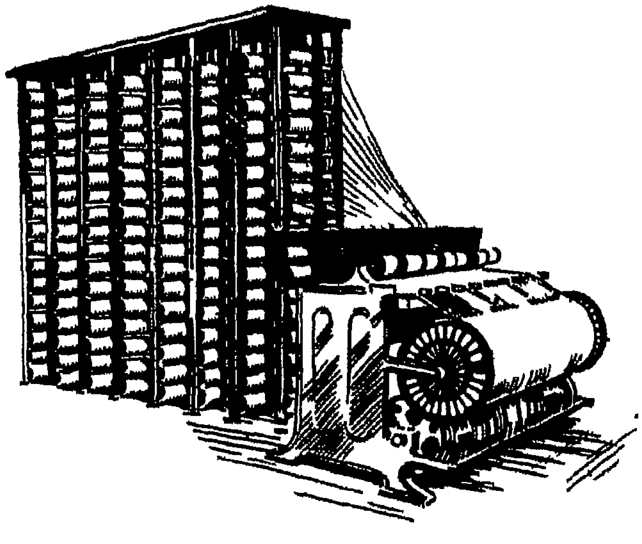
The results of the investigations may be summarized as follows:—

(a) At the slowest taker-in speeds (up to 300 r.p.m.) the flat strips are more flocky and dirty, containing more short fibre; the web is more irregular and cloudy, showing that such taker-in speeds are unsatisfactory.

(b) Raising the taker-in speed has the following consequences: The taker-in waste increases almost proportionately and contains a higher proportion of good cotton, whereas the cylinder and flat strips decrease, but in a less degree, so that the total card loss increases slightly on balance; the sliver contains rather more short fibre, but its regularity (in weight per yard) is unaffected; the yarn, however, is stronger and not appreciably different in appearance.

(c) There is an upper limit to the taker-in speed at which fibre accumulates on the teeth; this upper limit lies between 649 r.p.m. and 845 r.p.m. when the surface speed of the cylinder is respectively 1·28 and 1·05 times that of the taker-in.

(d) The cost of carding increases with the speed of the taker-in, largely owing to the loss of good cotton in the taker-in fly, but this disadvantage might be overcome by suitable modifications of the encasement.



Italian Cotton Wages.

The September issue of *Bollettino Della Cotonniera*, the trade organ of the Italian cotton industry, contains the national labour contract for the Italian Cotton Industry signed at Rome on August 30, 1932. The contracting parties were the General Fascist Confederation of Italian Industry and the National Confederation of the Fascist Syndicates of Industry. This is a national collective agreement affecting 250,000 cotton workers in Italy, containing 40 separate classes, together with a voluminous schedule of categories, wages and conditions, affecting hours, overtime and night-work. The normal working week is 48 hours of effective work, based on the eight-hour day. The piece-work rates are so designed that processes normally remunerated on a time basis are fixed so that an industrious worker of normal capacity shall earn at least 15 per cent. above time rates. The wage rates schedules for the Italian industry are provided in the accompanying table. For reference the approximate earnings are also shown in English money to the nearest penny at the current rate of exchange.

NEW WAGE SCHEDULES IN THE ITALIAN COTTON INDUSTRY

Time Workers (Minimum rates for eight hours)	Lire	English equivalent
Spinning		
(a) Female yarn testers and other female operatives whose duties require trust and the exercise of care	9·80	2/11
(b) Female cardroom operatives	8·40	2/6
Weaving (female operatives):		
Forewomen weavers and other operatives with duties of testers, weighers, measurers, piece-lookers, checkers, pattern weavers, provided that such duties require trust and the responsible exercise of care	11·00	3/3
Dyeing, bleaching, mercerizing and finishing:		
(a) Male workers responsible for the control of machines requiring aptitude and special practical training	16·40	4/10

NEW WAGE SCHEDULES IN THE ITALIAN COTTON INDUSTRY (*Continued*)

	Lire	English equivalent
(b) Other workers engaged on machines and in other dyeing, bleaching, mercerizing and finishing operations		
Males from 12 to 15 years	5 20 to 6 70	1 6 to 4 2½
15 to 16	8 90	
16 to 18	10 40	
18 to 20	12 00	
Over 20 years	14 25	
Females from 12 to 15 years	5 20 to 6 70	1 6½ to 2 8
15 to 17	7 40	
Over 17 years	9 00	
Skilled Maintenance Workers		
Male technical workers, e.g., mechanics, [illegible], firemen, carpenters, etc.	16 40	4 10
Piece workers (Average earnings* for eight hours)		
Spinning		
(a) Forewomen, female slubbing frame tenters	9 80	2 11
(b) Female intermediate frame tenters, fly frame tenters, finishing box tenters, combers, winders on work requiring special care and instructions	9 20	2/9
(c) Female scutchers, drawing frame tenters, sliver tenters, etc.	8 40	2/6
(d) Female ring spinners, yarn twisters, ordinary winders, doublers over 16 years of age, bundlers, packers	7 85	2 4
(e) Male spinners on self acting spinning machines	16 60	4/11
Piecers on self acting machines are paid a percentage based on the spinners' earnings, the amount not to be less than the daily rate for dyers of the same age		
Weaving		
(a) Female bobbin and other winders, reelers and other operatives	7 50	2 2½
(b) Female warpers, drawers-in, twisters-in, either by machine or hand	10 20	3
(c) Female weavers, burlers and menders, piece makers-up	9 20	2/9
(d) Male jacquard weavers making tapestry of the "Monza" type for furniture	14 25	4/2½

* By "average earnings" is meant the average earnings calculated for a period of four fortnights of all workers engaged on the production of a uniform article and using the same type of machine

Effect of Noise on Weavers.

In a report published by H M Stationery Office entitled "Two Studies in the Psychological Effects of Noise," at 1s 3d net, Messrs H C Weston and S Adams give the result of their experiments in connection with the effect of noise on weavers and their efficiency

Ten skilled weavers wore ear defenders during alternate weeks for 26 weeks and pick recorder readings were taken from one loom of each weaver. All looms weaving a double texture collar cloth 2/60's warp, 2/50's weft, 200 reed and 115 pick at 196 picks per minute. The Mallock Armstrong ear defenders worn fit into the ear, and at the outer end a very thin membrane of goldbeater's skin is enclosed between two discs of fine mesh wire gauze, so spaced as to prevent the transmission of very loud sounds. They reduced a noise intensity in the shed from 96 to 87 decibels, these being the units of physical intensity of sound. It is possible to carry on conversation without removing the ear defenders. All hours broken by stoppages due to causes other than re-shuttling and piecing broken ends were omitted when the results were worked out. Records of periods of artificial lighting and of shed temperature and humidity were kept. The results are considered for each weaver, and as between noisy and quiet weeks.

The average hourly output per weaver for the group studied in this investigation shows an increase of approximately 1 per cent when the loom noise is reduced by the use of ear defenders. Weaving, however, is largely an automatic process, and a small change in the number of picks made per hour may therefore indicate a much larger change in the time occupied by the weaver in performing the operations of re-shuttling and piecing broken ends. In the present case, under normal conditions of shed noise, weaving efficiency (the ratio of number of picks made to the possible number) was high, the average for the group being 91.7 per cent. This means that the operations controlled entirely by the weaver occupied five minutes of every hour. When the noise was reduced efficiency increased to 92.5 per cent, so that the performance of the same operations by the weavers occupied less than 4½ minutes of every hour; thus the personal efficiency of the weavers was increased by about 12 per cent. It is probable, therefore, that in other occupations comparable as regards intensity of noise but depending less upon the mechanical and more upon the human factor than weaving, the effect of noise upon the output may be considerably greater than that demonstrated by this investigation.

A study of the hourly variations of output during the day under conditions of reduced noise, as compared with normal conditions, is very interesting. The reduction of noise results in an increase of output in every hour but one, but this increase is not evenly distributed. Of the total net daily gain 56.92 per cent occurs during the three hours at the beginning of the work spells—i.e., during 7 a.m. to 8.15 a.m., 8.45 a.m. to 9.30 a.m., and 1-30 p.m. to 2.20 p.m. Of the remainder 33.36 per cent occurs during the penultimate hour of the morning and afternoon spells, when under normal conditions the output rate affords evidence of fatigue.

This distribution suggests the important conclusion that even after years of work in a noisy environment, the worker does not become completely adapted or acclimatized to noise, but goes through the process of adaptation daily. During the initial hours of work spells, when adaptation is minimal, the average loss of output is over 1.5 per cent, and in individual cases may be double that figure.

With the reduction of noise, output becomes consistently more regular and less variable from hour to hour and day to day.

Finally, while the available data are insufficient to justify any but tentative conclusions concerning the general significance of noise, they suggest that it is not a negligible factor in determining industrial efficiency; that, in fact, it must be recognized as one of the factors which can, in some way, exercise an appreciable influence on individual performance of non-auditory tasks, particularly at times when other factors combine to lower personal efficiency.

PORTUGAL.

A report prepared by His Britannic Majesty's Commercial Secretary in Lisbon upon the "Economic Conditions in Portugal" contains the following references to the textile industry in that country:—

The cotton textile trade, one of the most important industries in the country, is concentrated chiefly in the Oporto and Braga districts, and is said to employ about 550,000 spindles and 22,000 looms. There are 146 mills, the total average production of which is about 150,000,000 metres of material of a value of about £3,500,000, of which perhaps 95 per cent. is consumed at home and the balance exported to the colonies. The average consumption of raw cotton is about 16,000 tons, of which Angola and Mozambique provide together about 800 tons. The industry is said to employ 40,000 hands, with a wage bill of about £800,000, and supporting 100,000 families. During the greater part of 1931 trade was depressed, but following the suspension of the gold standard in the United Kingdom the price of cotton rose from 5$00 to 7$00 per kilogram, and there was an immediate demand for goods. Stocks were disposed of and all mills are now working full time. The demand from the Colonies has increased, owing to the recent increase of 15 per cent. of the import duties on foreign cottons, and to the fact that in both Mozambique and Angola it is easier to obtain exchange for national than for foreign imports. The quantity of cotton yarns spun and manufactured into cloth by Portuguese mills is increasing, and modern machinery is gradually being installed.

The centre of the woollen and worsted spinning and weaving industry is Covilhão and Tortozendo, where there are said to be about 900 looms, most of them equipped with German machinery, and about 50,000 spindles in the worsted spinning trade alone with a capacity of about 900 tons per annum. Towards the end of 1931 imports of tops and rovings increased considerably, and the spinning trade is now working to capacity, and in fact is at present unable to supply the weaving mills with the yarn they require.

The following statistics showing the importation of raw cotton,

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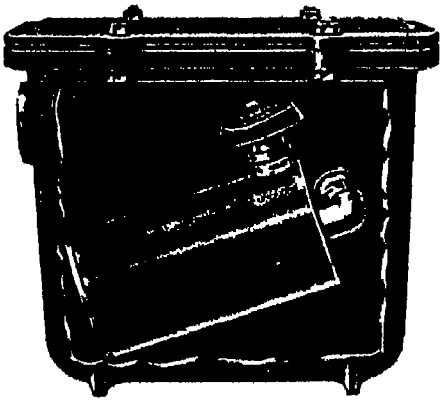

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yarns and fabrics of cotton during the years 1930 and 1931, and the first five months of 1932 are of interest:—

	Total Imports 1930 tons	Total Imports, 1931 tons	Total Imports 1932 (5 months) tons
Raw cotton ..	17,968	14,780	8,715
Cotton yarns	323	207	76

	Total Imports, 1929 £	Total Imports, 1930 £	Total Imports, 1931 £	From United Kingdom in 1931 £
Cotton fabrics . ..	737,800	661 200	415,600	242,000

The importation of cotton fabrics shows a further decline during the first five months of 1932, the value being £152,000

COTTON MILL WAGES IN U.S.A.

An official inquiry into wages and hours in the United States cotton industry in the early months of this year shows a great falling-off in earnings since 1928 and 1930. The inquiry covered 76,630 workers in 154 representative cotton mills in eleven States, and included 90 per cent. of the cotton-mill workers in those States.

Occupation and sex		Average full-time hours a week	Average number of hours actually worked in one week	Average hourly earnings cents	Average actual earnings in one week dollars
Picker tenders	male	53·8	44·3	23 3	10·31
Card tenders and strippers ..	„	53·9	43 2	25·2	10·87
Card grinders	„	53·8	47 7	33·6	16·03
Drawing frame tenders	„	54·3	41·7	23·0	9·57
„ „ „ .	female	53·0	42·9	22·2	9·51
Slubber tenders ..	male	53·9	42·8	29·1	12·47
Speeder tenders	„	54·2	43·5	27·3	11·86
„ „ ..	female	51·5	42·3	29·6	12·52
Spinners, mule . ..	male	50·9	35·0	60·3	21·08
„ frame	„	53·6	41·1	21·4	8·80
„ „	female	53·6	40·0	21·3	8·50
Doffers	male	53·9	41·7	25·3	10·56
„	female	52·6	41·2	27·3	11·24
Spooler tenders . ..	„	53·3	40·6	20·7	8·42
Beamer tenders . ..	male	53·3	43·1	36·4	15·68
Drawers-in, hand . .	female	53·2	42·3	26·9	11·39
Loom fixers	male	53·4	48·1	40·3	19·43
Weavers	„	53·1	46·1	31·4	14·48
„	female	52·0	45·3	30·7	13·89
All workers, 1932					
Male		53·7	45·5	28·4	12·91
Female		53·0	42·2	23·4	9·87
Male and female		53·4	44·3	26·6	11·78
All workers, 1930		53·4	42·7	32·5	13·88
„ 1928		53·4		32·1	*17·30
„ 1926		53·3	—	32·8	*17·48

* Average full-time weekly earnings

NIGHT WORK IN COTTON MILLS

The Cotton Textile Institute of New York has recommended that productive night operations in cotton mills should be discontinued for one year as from October 1932.

Discussing this recommendation Mr. G. A. Sloan, President of the Institute, observed that ever since the War the industry has been subject to the depressing influence of the threat of over capacity due not so much to excessive equipment as to the widespread practice of two shift operations. This situation has resulted in intermittent work and unequal distribution of employment.

It is expected that the new policy which is recommended for voluntary consideration in each mill and which applies only to productive machinery (spindles and looms) will help to concentrate operations and stabilize employment on the day shift. The supporters of this recommendation believe that its observance will tend to ensure more regular work and at the same time encourage the confidence of customers and the general public in the industry's ability and determination to put its house in order.

Mr. Sloan emphasized that the recommendation constitutes a vitally necessary and progressive step for the cotton textile industry, its employees and customers, and for cotton farmers, pointing out that the industry's daytime productive capacity alone is well in excess of the present demand for cotton goods and ample to meet all requirements for the near future. He expressed the opinion that the removal during the coming year of this threat of over production should stimulate buying and result in increased consumption of raw cotton.

The recommendation first appeared in the form of a unanimous resolution adopted at a meeting of the Institute's Executive Committee on June 16, 1932. It has since been endorsed by an overwhelming percentage of the Board of Directors. The directors supporting the recommendation represent equipment aggregating more than 9,000,000 spindles. It is understood that the Institute's officials and directors will immediately undertake to canvass the various mill managements as to their respective attitudes regarding the proposal.

AMERICAN COTTON IN CHINA

In 1931 the production of cotton in China was the lowest since 1921. The main reason for this was the floods which occurred in the cotton producing districts of the Yangtsze Valley just at the time when the crop was about to be picked. This caused great uneasiness among the Chinese millowners, and they would have been badly affected had it not been for the importation of foreign cotton to meet their requirements. China produced 6,399,780 piculs (133⅓ lbs. to one picul) of cotton in 1931, as compared with 8,809,567 piculs in 1930. The 4,500,000 spindles contained in all the cotton mills in China consume at present no less than

9 000 000 piculs of raw cotton per annum It is estimated that about 70 per cent of the cotton grown in China is used for manufacturing yarn and the rest is used for making blankets, bed ticking, etc In order to make up the deficiency between production and consumption of raw cotton, China has to import foreign cotton, particularly the American cotton at the current low price, to keep her spindles running

During the last six months foreign cotton was the largest item in China's imports From January to May inclusive of the current year China imported 1,974,316 piculs of foreign cotton, of which more than 1,700,000 piculs came from America The imported foreign cotton during this period cost China nearly 160,000,000 taels The following table shows the value of raw cotton imported into China during the past years —

1924	43 836 595	Taels ($1 40 Chinese currency)
1925	70 852 500	
1926	55 473 810	
1927	82 204 272	
1928	68 48 778	
1929	92 078 100	
1930	155 13 567	
1931	160 000 000	

Generally speaking, the price of standard Chinese cotton is usually from $10 to $20 Chinese currency) per picul lower than that of low middling American, ex wharf, Shanghai For instance, if the price of low middling American, ex wharf, Shanghai, is $50 per picul, the standard Chinese is quoted around $40 or less This margin of difference in price fluctuates, the amount of the fluctuation depending upon the supply and demand of Chinese cotton During the past year the price of American cotton, ex wharf, Shanghai, was in many instances lower than that of the standard Chinese For instance, in the early part of this year, low middling American was sold in Shanghai at around $45 per picul, while standard Chinese was quoted at around $48, and now the former is sold at $48 while the latter realizes about $45 This abnormal disparity between American and Chinese cotton is due to the fact that, despite the low price of middling, Chinese farmers and cotton dealers are unwilling to dispose of their holdings at too low a price Another factor is that some Chinese millowners who cannot finance a large shipment of American cotton have to operate their mills from hand to mouth by purchasing Chinese cotton in small lots

(*Chinese Cotton Mill Owners' Association*)

Cotton Wages in Shanghai.

A publication issued by the Institute of Social Research, Peiping, in 1931, entitled " A Study of the Standard of Living of Working Families in Shanghai," has just come to hand It appears from this report that there are 237,522 factory workers in Shanghai and district Of these there are occupied in the cotton-spinning section 176,008, and in the weaving and finishing sections 75,434.

A wage table is included, which should be of interest to the reader. The report states:—

"Generally speaking, the wage rate is lower among female workers. Thus, the average wage rate per day is 47 cents for women and 51 cents for men. Calculated according to these rates, on the assumption that they work throughout the month without a holiday, the wages are therefore $14.10 per month for women and $15.30 per month for men.

AVERAGE DAILY WAGE RATES OF COTTON MILL WORKERS

	Average rate per day	
Department	Male	Female
General workers :	$	$
Spinning	0·46	0·47
Roving	·51	·50
Reeling	·40	·44
Baling	·58	·42
Weaving	·57	·55
Bleaching and dyeing	·53	·46
Blowing	·45	
Repair	·51	
Roller	·45	
Carpenter	·59	
Weighing	·65	
Yarn testing	·40	
Thread spinning	·40	·41
Waste cotton picking	·42	·31
Compressing	·54	
Attendant	·39	
Mason	·64	
Clerk	·89	
Storehouse	·35	
Boiler	·68	
Bamboo work	·60	
Materials	·54	
Finishing	·68	
Drawing	·45	·23
Not reported	·41	·45
All general workers	·51	·47
Foremen :		
Spinning		0·90
Roving	0·87	·83
Reeling	1·02	- -
Not reported	1·47	
All foremen	1·10	·88
Child workers :		
Spinning		·34
Reeling		·31
All child workers	—	·33

But apart from the stipulated wages, some workers also receive from their employers a bonus for labour and a subsidy for the purchase of rice. The former is paid to the worker on the condition that he has asked no leave for a certain period of time. The usual rule is that he is paid two days' extra wages for a fortnight's uninterrupted work or four days' wages for one month's uninterrupted work. Exceptions to this rule are also found in cases where no work bonus is given, or only two or three days' wages are given in extra for one month's uninterrupted work. The rice purchase subsidy, which is paid to the worker to meet the rising cost of rice, varies from two cents per day to three cents per day, but a daily subsidy of two cents, that is 60 cents per month appears to be the usual rule. There are a certain number of factories in Shanghai where no rice subsidy is given.

Assuming that the worker goes to the factory uninterruptedly for one month, then the earnings, which consist of the wages of 34 days, together with the regular rice subsidy of 60 cents, would be $17.90 for men and $16.58 for women, and $38.00 for foremen and $30.52 for forewomen and $11.82 for child workers. These figures, however, are entirely hypothetical, representing the maximum amount a worker could get, and the actual earnings of various workers as were recorded in the books were in no case equivalent to our hypothetical figures.

Apart from the wages and the rice bonus, certain workers are also in receipt of other incomes in the form of double pay and bonus in the last month of the Chinese calendar but it is pointed out that not all the cotton mill operatives are in receipt of these extra payments.

HOURS OF WORK

The hours of work of the cotton-mill workers are classified in the following table, under day and night work in summer and winter.

		Average working hours per day
Day work	in summer	10.40
	in winter	10.36
Night work	in summer	10.46
	in winter	10.40
General average		10.40

COTTON SPINNERS' CARTEL IN CZECHO-SLOVAKIA.

Negotiations between the Czecho-Slovak cotton spinning mills have led to the conclusion of an agreement on production and prices signed by 99 per cent. of the industry.

The aim of the agreement is to ensure as far as possible uniform employment at individual mills and to prevent losses through inadequate prices.

In future selling prices are to be constantly adjusted to the movements on the American raw cotton markets, so that Czecho-Slovak yarn may be able to maintain its competitive power on foreign markets.

TURKEY

It is reported that the Turkish Government is taking steps to develop the existing cotton textile industry, and has recently arranged for the importation of mill equipment from Russia.

Turkey has at present over 100,000 cotton spindles and 1,220 cotton power looms.

MISCELLANEOUS

New Uses for Cotton.

MEN'S COTTON SUITS.

The Cotton-Textile Institute in New York has for some time been corresponding with the Laundry Owners' National Association of the United States and Canada, Inc., with a view to bringing the charges for laundrying men's cotton suits to a figure which will encourage their use, and at the same time yield the laundrymen a reasonable profit. Mr. Geo. A. Sloan, President of the Institute, further states that their own investigations prove cotton and other washable suits enjoyed a very marked increase in popular favour this summer. The new anti-crease process ought to give a considerable impetus to cotton suits by all classes of potential consumers.

ROLLER BEARINGS.

A new addition to the many thousands of uses of cotton in laminated form is the manufacture of bearings for machinery operating at high pressure. Roller bearings of cotton fabric compressed with other material, such as bakelite, are now produced in sizes ranging up to units large enough for service with shafting 12 inches in diameter. Bearings of this type are employed in machinery for rolling steel ingots. Among the advantages claimed for them are long service in heavy duty and added economy due to the fact that they can be lubricated with water.

SAFETY HELMETS.

Safety helmets for miners are now also made of laminated cotton fabric, and have been quite largely introduced as miners' equipment in the Middle West. Their composition is similar to that of the materials in the bearings. A popular type resembles the trench helmets of the French troops in the World War. They are light in weight, but have great strength and do not warp or corrode under exposure to moisture or acids in mine service. The laminated cotton helmet is also known in Germany through the introduction of an appropriate type into police service in Berlin.

RUNNING BOARDS.

Another recent innovation is the use of laminated cotton for running boards on automobiles. Cotton fabric compressed with resinous material is also shaped into pipe and fittings for conducting acids and other highly corrosive fluids. Again, laminated cotton is now used for the manufacture of shoe guides and back-pressure valves for oil-well drilling equipment. New uses for the material also take it into the home, for example, in the form of a new housing for electric vibrators. The new air-conditioning installations which provide controlled temperature and moisture in homes also function with various parts made of laminated cotton

DIRIGIBLES

The new airship 'Macon' has an area of 92,000 square yards of cotton cloth, and in terms of a single strip one yard wide which would be more than 50 miles in length

For the outer covering of the airship, whose construction is nearing completion 36,000 square yards of cotton fabric is required It might be assumed from its silvery appearance that this covering is metal, but the metallic sheen results from treatment of the cotton fabric with four coats of acetate cellulose "dope," two of them containing aluminium powder This treatment tightens the fabric over the frame, gives it smoothness and waterproof qualities, and deflects the sun's rays

The gas cells have even greater cotton requirements, 56,000 square yards of fabric being used for this purpose This fabric is rubberized The strength and durability of cotton, demonstrated by years of service in all types of airships, including the United States Navy dirigible "Akron,' is further emphasized by the fact that the fabric for the "Macon's" outer covering weighs only three ounces per square yard, and for the gas cells two ounces

COTTON HOUSES

Coincident with the holding of the annual meeting of the Cotton-Textile Institute in New York, on October 19 last, an exhibit of new uses for cotton was staged, which included several recently developed items of unusual interest

Especially prominent among the latter were models of cotton houses, ostensibly designed for spending the week-end on the seaside beaches

The "cotton house" as erected would have a wooden framework enclosed with light material such as plywood, and the whole covered with cotton canvas, both on the inside and the outside Insulating material and an aluminium-faced felt paper which deflects sunlight and heat would be placed between the outer and inner cotton walls to assure the utmost living comfort in any kind of weather, and also for complete sound-proofing Interior cotton partititon walls would also be insulated and sound-proofed Cotton fabric and other materials used in construction would be fully fire-proofed

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COTTON ROADWAYS JUSTIFIED.

The Burnley authorities who experimented with a cotton roadway two years ago, and who concluded that the experiment had not been successful, will be surprised to read the following statement extracted from *Commerce and Finance* —

" After six years of service under general traffic conditions on stretches of South Carolina highways cotton fabric used as bonding material has conclusively demonstrated its value in road construction According to the Cotton Textile Institute a report by Mr Charles H Moorefield South Carolina highway engineer discloses that the fabric is still sound and apparently as strong as when it was installed Furthermore, by holding the roadbed intact where used, it has reduced the maintenance cost Concurrently, the cotton fabric has contributed to public convenience because the greater permanence of good road surface where it was installed has eliminated interference with traffic attendant upon repairs or renewal

With prospects for the extensive use of cotton as a paving base, an experimental stretch of a mile is about to be made near Elk City soon according to information received from that quarter

An Elk City cotton firm gave 100 bales of cotton for the purpose of testing this type of pavement made of oil soaked aggregate over cotton strips laid with cold liquid asphalt It is further stated that recent experiments with this paving in Louisiana have proved very satisfactory

The fabric is supposed to prevent deterioration of the slabs by eliminating the cracking caused by extremes of temperature and consequent expansion and contraction

This type of paving costs only $3,500 to $4,500 per mile and is said to be remarkable for its lasting quality

BRITISH TEXTILE EXHIBITION, 1933

The last British Textile Exhibition, held at the White City last February, proved of such success as to warrant the holding of the exhibition again in 1933, and on a still larger scale The display will take place from February 20 to March 3 next, and many new novelties and new productions are being prepared for exhibition

The exhibition will occupy some 15,000 square feet more than was required for the magnificent display at the British Industries Fair last February Every section will be larger and more representative Yarns, piece goods and ready-to-wear clothing for men, women and children will be shown in every variety, suitable for every climate and every purse

Lancashire manufacturers whose names are household words throughout the world will be showing cotton goods, art silks, silks and unions of each of these in endless ranges and for every market from the tropics and the Far East to the daintiest fashion fabrics for the temperate zones Lancashire was greatly impressed by the number of overseas textile buyers who visited the Fair last February Now that they are able to offer an even wider selection with improved quality and design at even lower prices, they have determined to produce a display at the Fair next February which buyers in all parts of the world will feel it a duty to see

Lancashire Wage Settlements.

SPINNING SECTION.

THE terms of the agreement arrived at between the Federation of Master Cotton Spinners' Associations Ltd and the Operative Spinners' and Cardroom Amalgamations on the 8th November, 1932, are as follows —

1 PROVISIONS FOR AVOIDING STOPPAGES OF WORK

(*a*) *Conciliation Procedure*

Whereas by an agreement between the Federation of Master Cotton Spinners Associations and the Amalgamated Association of Operative Cotton Spinners and Twiners, dated January 4th, 1915, it was agreed

> That, in disputes other than bad spinning disputes, for which provision has already been made, it is agreed that notices shall not be tendered at any mill until the matter in dispute has been considered by the joint committees of the two organizations, both local and central,

and whereas, by an agreement between the Federation of Master Cotton Spinners' Associations and the Amalgamated Association of Card and Blowing Room Operatives, dated December 11, 914, it was agreed

> That notices to cease work shall not be posted at any mill until the matter in dispute has been considered by the joint committees of the two organizations, both local and central,

it is now agreed that the provisions of the above agreements shall continue to be operative, and that, for the purpose of the more effective avoidance of stoppages of work, the following additional provisions shall operate —

> (1) When a question in dispute has been dealt with in accordance with the provisions of the above agreements, and a settlement has not been reached, a conciliation committee (consisting of not less than four, or more than six, from each side of the Federation of Master Cotton Spinners' Associations on the one hand and the Amalgamated Association of Operative Cotton Spinners and/or the Amalgamated Association of Card and Blowing Room Operatives on the other hand) shall be appointed, the members being chosen according to the nature of the subject in dispute

> (2) The chairman of the Conciliation Committee shall be an independent person to be nominated by agreement between

the parties, or, alternatively, by the Minister of Labour He shall be chosen for a definite period as standing chairman.

(3) There shall be associated for consultation with the standing chairman two independent members (one to be appointed by each side), who shall also be standing members and appointed for a specified period.

(4) There shall be joint secretaries, one to be appointed on behalf of each organization.

(5) The joint secretaries of the organizations concerned shall inform the standing chairman as soon as the matter has passed through the normal procedure without a settlement being reached, and he will thereupon make arrangements for the convening of the Conciliation Committee.

(6) The Conciliation Committee shall first endeavour to settle the matter by agreement, but, failing settlement, the standing chairman, after consultation with the independent members, shall make a recommendation.

(7) The chairman shall have authority to make an award if invited to do so in writing by both sides.

(8) From the time at which he begins to sit with the committee, the chairman, in consultation with the other independent members, shall have the right to have such technical, statistical, or other assistance as he may consider to be necessary.

It is agreed that the provisions herein contained shall remain in operation for a period of three years from the date of signature, and thereafter shall be terminable on six months' notice being given on either side.

(*b*) *Bad Spinning Complaints.*

It is agreed that

the agreement between the Federation of Master Cotton Spinners' Associations and the Amalgamated Association of Operative Cotton Spinners and Twiners, dated September 9, 1913, relating to complaints in connection with bad spinning, shall continue in operation, and that the parties shall discuss and agree upon such extension of that agreement as they may consider to be necessary to avoid stoppages of work arising from failure to settle such complaints.

2. HOURS.

It is agreed that—

(*a*) The 48-hour normal week in the cotton-spinning industry shall be restored.

(*b*) The circumstances of the industry require that the maximum production shall be secured, and the parties therefore agree to discuss and settle by the usual procedure, supplemented by the additional conciliation procedure the means by which working hours may be made as fully effective as possible

3 WAGES

It is agreed that—

There shall be a reduction of 14 per cent on the standard piece price list rate of wages which, in the case of operatives who are at present paid 82½ per cent on standard lists, will reduce the aggregate percentage additions on such lists from 82½ per cent to 68½ per cent, and mean a reduction of 7 67 per cent on their current wages and a similar reduction of 14 per cent from other lists which vary from 82½ per cent and an equivalent reduction in the wages of all operatives who are not paid by the piece price lists

4 EXCEPTIONAL WAGES RATES AND ANOMALIES

It is agreed that—

A joint conference between the Federation and the Amalgamated Association of Operative Spinners and Twiners and/or the Amalgamated Association of Card Blowing and Ring Room Operatives shall take place without delay to consider such claims to exceptional wages rates as may be submitted by either side and the review of anomalies in regard to working conditions with a view to their settlement by the usual procedure, supplemented by the additional conciliation machinery

5 REINSTATEMENT

It is agreed that—

(1) The central body of the employers should strongly recommend their local associations in a spirit of goodwill to persuade all their members as well as the firms immediately concerned, to offer employment as speedily as possible to operatives who have been displaced

(2) Immediate arrangements should be made to have the matter taken up jointly by the local associations concerned

(3) If any difficulties still exist at the end of two months, the situation should again be reviewed jointly by the central organizations

6 HONOURING OF AGREEMENTS

It is agreed that—

All the parties to this agreement shall make every endeavour to secure the honourable observance of agreements made between their respective organizations

Finally it is agreed that the provisions of this agreement shall come into force as from Monday, the 7th November, 1932

WEAVING SECTION

We give below a copy of the agreement arrived at on the question of wage rates to be paid in the manufacturing section of the Lancashire cotton industry

> 'The reduction shall be 15½ per cent on the Standard Piece Price List rates of wages, which in the case of operatives who are at present paid 82½ per cent on Standard List will reduce the aggregate percentage additions on such List from 82½ per cent to 67 per cent and mean a reduction of 8.493 per cent on their current wages and a similar reduction of 15½ per cent from other Lists, which vary from 82½ per cent and an equivalent reduction in the wages of all operatives who are not paid by the Piece Price Lists'

The effect of such agreement is shown in the following table

Where the basis is the	Percentage addition prior to dispute on original list per cent	Percentage addition after settlement on original list per cent
Uniform list (grey)	82½	67
Colne coloured goods list		
Coloured stripes	85	69½
Coloured checks	80	64½
Mule cop winding list	82½	67
Oldham velvet list		
Weft 40 s and below	97½	82
Above 40 s	92½	77
Blackburn twisting list	87½	72
Blackburn drawing list	87½	72
Blackburn tape sizing and slashing	77½	62
Blackburn overlookers extras	82½	67
Burnley beaming list	82½	67
Standard list for weaving fustians	77½	62
Colne warp dressing list	77½	62
Nelson drawing list (grey)	77½	62
Nelson twisting list (grey)	82½	67
All other lists where the percentage was	82½	67

The reduction of 15½ per cent on Piece Price List rates of wages is equivalent to a reduction on current wages of

8.732 per cent	where the wages were previously	77½ per cent on standard
8.493		82½
8.378		85
8.267		87½
8.052		92½

and in the case of workpeople who are paid base wages or who are not paid by Piece Price Lists the necessary adjustment consequent upon the reduction of 15½ per cent on List Prices can be made by reducing the current weekly wages by the requisite percentage applicable to the circumstances according to the above table

In the case of loom overlookers who are paid fixed wages and who are not paid poundage rates the necessary adjustment consequent upon a reduction of 15½ per cent on List Prices can be made by reducing their previous weekly wages by 8.493 per cent

In the case of loom overlookers who are paid poundage on weavers earnings no alteration need be made as their wages will be automatically adjusted by the reduction in weavers' earnings

An adjustment will require to be made in the payment to loom overlookers for extras and such alterations can be effected by adding in future 67 per cent on the prices paid prior to August 1914, for extras In those districts where there is a list of prices for extras the total percentage addition on such list will be reduced by 15½ per cent In other cases the adjustment can be made by reducing the current prices for extras by 8.493 per cent

The minimum wage for clothlookers warehousemen, etc, is subject to a reduction of 15½ per cent on List Prices and, after giving effect to such reduction will be as follows —

Male adult clothlooker (21 years of age and over for 48 hours)	£2 0 11
General warehousemen and all other male adult labour in the warehouse etc (21 years of age and over for 48 hours)	£1 16 11

In those districts covered by the agreements made between the Cotton Spinners and Manufacturers Association and the Enginemen and Boiler Firemen s Associations the reduction of 15½ per cent on List Prices will apply to the wages of mill engine tenters and men in charge of an engine and boiler combined and the following is given as an example of how the wages of these men should be adjusted —

EXAMPLE

Wages prior to 1914 say	£1 15 0
Add 10/- to make up to standard	0 10 0
Standard	£2 5 0
Add 8/- balance of advances August 1914 to June 1918	0 8 0
Add 27 per cent on standard rate being total advances (less reductions) from June 1918 to date	0 12 2
Total wages for 62½ hours	£3 5 2

The above wages are calculated on the old working hours The proportion for 48 hours in such an instance will be £2 10s 0½d Overtime in excess of 48 hours should be paid to these men at time and a quarter and time and a half rates in accordance with the agreement of January 6th 1920

The payment for boiler flue and economiser cleaning will be 22 per cent over August, 1914 rates

The following hourly standard rates of pay for boiler firemen under engineers ash wheelers and oilers and greasers should have 27 per cent added after giving effect to the recent reduction

Boiler firemen burning under 50 tons weekly	8d per hour
50 tons and over weekly	9d
Under engineers	8½d
Ash wheelers	7¾d
Oilers and greasers who have no control of engines	7½d

Overtime in excess of 48 hours per week should also be paid to these men at time and a quarter and time and a half rates in accordance with the agreement of January 6th, 1920.

The Central Committee recommend that the present reduction should apply to all management and clerical staff where the wages of these people have not been reduced since September, 1920.

The agreement comes into force as from Tuesday, September 27, 1932.

U.S. CROP REPORT (NOVEMBER).

(*Too late for insertion under American Section.*)

The report on the American cotton crop, issued on November 9 by the Crop Reporting Board, increased their estimate of probable production by 522,000 bales above their October estimate. In a supplementary statement the Board states that the crop is exceeding the last month's expectations in all the greater states except Mississippi, though the greater part of the increase is in the states west of the Mississippi River. The weather during the month was mostly favourable for picking and ginning in the sections where appreciable quantities remained to be harvested. While there has been some lowering of grade by rains the yield loss is very small.

The following table gives details of production (in thousands of bales):—

	1932 Nov 1	1932 Oct 1	1931 Crop	1930 Crop
Virginia	28	29	42	42
North Carolina ..	575	519	756	775
South Carolina ..	650	610	1,005	1,001
Georgia	807	795	1,393	1,593
Florida	15	16	43	50
Missouri	250	191	289	154
Tennessee	395	381	594	377
Alabama	860	836	1,420	1,473
Mississippi ..	1,100	1,100	1,761	1,464
Louisiana	580	540	900	715
Texas	4,225	4,063	5,322	4,038
Oklahoma	1,000	959	1,261	854
Arkansas	1,160	1,081	1,907	874
New Mexico	88	91	98	99
Arizona	84	84	115	155
California	120	120	177	261
Other States .. .	10	10	12	7
Total	11,947	11,425	17,095	13,932

The ginning report issued at the same time as the above gives total ginnings for the whole Cotton Belt as 9,246,000 bales, as against 12,124,295 on the same date as last year.

COTTON TRADE STATISTICS

GREAT BRITAIN

EXPORTS OF COTTON AND ARTIFICIAL SILK MIXED PIECE GOODS.

Country	Exports during 8 months ending August, 1932		Compared + or — with Exports 8 months ending August, 1931	Exports during August, 1932		Compared + or — with Exports during August, 1931
	Sq. yds	£	Sq yds	Sq yds	£	Sq. yds.
Australia . ..	4,264,210	225,808	+1,038,998	1,066,727	53,598	+ 572,277
British India .	4,182,153	102,117	+2,838,182	1,346,794	27,090	+1,181,241
Canada	3,509,915	169,853	— 153,135	411,475	20,009	+ 72,038
New Zealand . ..	1,991,406	111,460	+ 823,567	611,357	33,533	+ 382,243
British South Africa	1,526,710	97,803	--1,116,163	451,641	28,240	— 22,401
Netherlands .. .	1,302,428	59,934	+ 884,614	268,170	10,202	+ 252,648
Dutch East Indies ..	1,100,163	41,782	+ 404,168	295,087	10,460	+ 7,523
China (including Hong Kong) .. .	1,057,202	47,665	+ 355,692	34,737	2,025	— 23,098
British West Africa .	1,031,899	32,199	+ 258,156	203,634	6,037	+ 132,570
Egypt .	614,056	21,448	- 89,256	56,429	1,858	— 18,679
Argentina	516,542	28,806	37,103	213,549	10,460	+ 111,676
Ceylon . . .	445,481	9,019	+ 180,830	121,407	2,163	+ 57,141
Straits Settlements and Malay States	361,146	17,476	+ 272,137	22,111	962	+ 3,383
Other countries .	9,835,734	406,384	—	1,910,158	408,318	—
Total (all markets)	31,859,375	1,374,814	+6,171,178 + £118,863	7,014,182	275,354	+4,027,144 +£131,917

JAPAN.

EXPORTS OF COTTON PIECE GOODS FOR THE FIRST SIX MONTHS, 1932.

We extract the following figures from the *Journal* of the Japan Textile Association :—

	First half, 1932 Thousands sq. yds.	When compared with 1931 Thousands sq yds.
Shanghai	4,796	— 72,202
Tsienshin	45,916	+ 19,301
Zintau	26,835	+ 13,176
Dalny	43,630	+ 25,299
Hankaw	2,338	— 2,294
Manchuria	3,618	— 8,691
All other China	11	— 2,097
Hong Kong	9,627	— 15,499
Siam	9,738	+ 7,480
Philippine	799	-- 12,105
Dutch India	131,545	+ 42,562
Straits Settlement	26,411	+ 4,819
Australia	12,346	+ 4,283
British India	273,742	+ 93,788
French India	411	+ 180
Egypt	70,663	+ 11,934
Other Africa	56,989	— 5,326
Balkans	14,087	+ 9,516
S. America	8,634	+ 26
Aden	27,030	+ 11,988
Persia, Arabia	21,015	— 3,358
All others	7,794	-- 53
Total	814,973	+ 114,941
Value (Thousands of Yen)	107,888	+ 5,393

U.S.A.

EXPORTS OF RAW COTTON AND COTTON GOODS

(All figures are in thousands, i.e. 000 omitted.)

Articles	Unit of Quantity	Twelve months ending June 1931 Quantity	1931 Value	1932 Quantity	1932 Value
			Thousands $		Thousands $
TEXTILES			[illegible]		[illegible]
COTTON UNMANUFACTURED	bal lb	6 784 3 589 984	424 577	8 633 4 566 817	331 298
Raw cotton except linters	bal lb	6 676 3 523 762	422 104	8 516 4 494 171	33[illegible]
American Egyptian (Pima)	bal lb	1 [illegible]71	144	[illegible]01	33
Other 1⅛ in. and over	bal lb	210 108 712	15 949	192 100 412	5 337
Upland under 1⅛ in.	bale lb	6 465 3 414 379	406 011	8 321 4 393 878	32[illegible]
Linters	bale lb	108 66 222	2 473	*55 *33 706	*810
Grades 1 to 7 inclusive	bale lb	—		*61 *37 889	*871
Grade 8	bale lb	— —		†1 †778	†10
COTTON SEMI-MANUFACTURES	lb	65 166	11 970	97 712	9 003
Cotton pulp	lb	—	—	†16 520	†1 001
Cotton mill waste	lb	39 269	3 062	18 221	2 615
Cotton rags except paper stock		9 318	638	8 412	527
Cotton batting, carded cotton and roving		311	53	31[illegible]	13
Cotton yarn—					
Carded yarn, not combed		7 170	1 781	6 031	1 51[illegible]
Combed yarn—					
Mercerized		8 082	5 044	[illegible] 30[illegible]	3 02[illegible]
Not mercerized		1 010	432	814	[illegible]30
COTTON MANUFACTURES		—	53 507		43 582
Cotton thread and cordage—					
Sewing thread		963	1 031	703	724
Crochet, darning and embroidery cotton		32	12	13	18
Twine and cordage		2 870	957	2 107	633
Cotton cloth, duck and tire fabric	sq yd	383 453	11 969	391 015	32 187
Tire fabric—					
Cord		422	16[illegible]	1 084	306
Other		610	213	573	94
Cotton duck		8 631	2 271	7 373	1 310
Heavy filter, paper dryer, hose and belting duck		455	260	71	108
Unbleached (grey)					
Ounce		3 530	190	3 722	512
Numbered		2 830	826	1 078	106
Bleached		1 081	251	806	117
Coloured		705	235	432	107
Cotton cloth, unbleached (grey)		100 370	6 802	102 557	5 180
Drills and twills		7 457	632	8 051	580
Sheetings 40 in. wide and under		59 733	3 841	69 137	3 172
Sheetings over 40 in. wide		761	70	515	41
Osnaburgs		18 040	1 418	16 028	957
All other unbleached		11 382	781	8 828	430

* July 1 to Dec. 31, 1931. † Jan. 1 to June 30, 1932.

U.S.A. EXPORTS—*Continued.*

Articles	Unit of Quantity	Twelve months ending June			
		1931		1932	
		Quantity	Value	Quantity	Value
COTTON SEMI-MANUFACTURES—*cont.*			Thousands $		Thousands $
Cotton cloth, duck, and tyre fabric—continued—	Sq. yd.				
Cotton cloth, bleached .	"	54,863	5,467	58,863	4,575
Drills and twills	"	2,045	429	2,671	300
Pyjama checks	"	5,264	430	4,554	290
Sheetings 40 in. wide and under	"	11,927	1,091	19,027	1,288
Sheetings over 40 in. wide .	"	3,511	421	2,345	233
All other bleached ..	"	31,216	3,090	30,266	2,455
Cotton cloth, coloured .	"	218,487	27,051	221,188	20,721
Voiles	"	44,032	4,939	40,198	3,736
Percales and prints, 32 in. and narrower	"	17,468	1,479	14,614	1,037
Percales and prints, over 32 in. wide	"	10,878	1,253	14,777	1,342
Flannels and flannelettes .	"	1,905	249	2,418	216
Khaki and fustians ..	"	3,531	615	3,869	552
Denims .. .	"	17,735	2,306	17,864	1,709
Suitings (drills, etc.) . ..	"	19,937	2,803	16,067	1,838
Ginghams	"	4,846	447	4,274	292
Chambrays	"	15,075	1,423	18,051	1,237
Other printed fabrics—					
7½ and more yds. per lb. ..	"	16,186	2,340	24,880	2,459
Less than 7½ yds. per lb. ..	"	17,296	2,151	17,970	1,713
Other piece-dyed fabrics—					
5 and more yds. per lb. ..	"	18,988	2,185	23,076	1,882
Less than 5 yds. per lb. ..	"	10,999	1,352	10,749	1,016
All other yarn-dyed fabrics ..	"	11,051	1,419	8,698	855
Cotton and rayon mixtures (chief value cotton) ..	"	7,960	2,090	3,683	747
Other cotton fabrics—					
Blankets	lb.	954	486	689	267
Damasks	sq. yd	442	101	239	46
Pile fabrics, plushes, velveteens and corduroys ..	"	440	282	307	185
Tapestries and other upholstery goods	"	105	111	32	29
Cotton fabrics sold by the lb.	lb.	6,334	1,701	9,348	2,171
Cotton wearing apparel ..		—	7,968	—	4,225
Knit goods—					
Gloves	doz. prs	98	155	46	64
Hosiery—					
Women's	"	770	1,275	445	599
Children's	"	309	452	242	291
Men's socks	"	392	644	209	299
Underwear— ..	doz.	386	1,324	*144	*423
Men's and boys'	"	—	—	†48	†110
Women's and misses' ..	"	—	—	†34	†58
Children's and infants' ..	"	—	—	†3	†6
Sweaters, shawls, and other knit outerwear	No.	234	166	166	89
Other wearing apparel—					
Collars and cuffs	doz.	87	122	43	50
Cotton overalls, breeches, and pants	"	41	124	30	250
Underwear, not knit	"	76	326	48	180
Shirts	"	184	1,634	163	1,149
Dresses, suits, and waists ..	No.	862	669	374	295
Other cotton clothing ..		—	777	—	353
Other cotton manufactures—					
Handkerchiefs	doz.	88	56	98	65
Laces, embroideries and lace window curtains	yd.	2,011	80	1,458	76
Woven belting for machinery	lb.	201	124	147	70
Cotton bags	"	4,728	976	4,612	932
Quilts, comforts, counterpanes and bed spreads ..	No.	122	170	80	70
Bed sheets, pillow, bolster and mattress cases.. ..	doz.	23	146	17	75
Towels, bath mats and wash cloths	"	462	648	259	320
Other cotton manufactures, n. e. s.		—	2,659	—	1,189

U.S.A.

TOTAL COTTON CONSUMPTION, JULY 31, 1932,

(with comparisons—exclusive of linters)

Month	1913–14	1927–28	1928–29	1929–30	1930–31	*1931–32	5-year average, 1926–27 to 1930–31	Per cent. this year is of 5-year average
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Per cent
August .	432,350	634,520	526,340	558,754	352,626	425,819	514,499	82·8
September	442,435	627,784	492,307	545,834	393,390	463,704	525,977	88·2
October .	511,923	613,520	616,238	639,759	443,284	462,025	576,232	80·2
November	456,356	626,742	611,173	541,153	415,315	428,870	555,620	77·2
December ..	456,262	538,786	533,301	452,685	405,518	416,517	506,655	82·2
January .	517,299	586,142	668,286	576,100	450,117	435,337	576,789	75·5
February ..	455,231	572,875	594,720	494,396	433,376	450,018	536,076	83·9
March ..	493,354	581,325	631,669	507,646	490,509	488,655	580,846	84·1
April ..	499,646	524,765	631,802	531,911	508,991	367,280	563,090	65·2
May ..	466,744	577,384	668,650	473,284	465,363	332,439	562,926	59·1
June .	446,145	510,399	569,414	405,236	453,001	320,783	519,758	61·7
July .	448,333	439,821	547,165	379,022	450,584	278,656	477,331	58·4
Total	5,626,078	6,834,063	7,091,065	6,105,840	5,262,074	4,869,103	6,496,705	74·9

*Subject to slight revisions.

WORLD SUPPLY AND DISTRIBUTION OF ALL KINDS OF COTTON.

(As prepared by the New York Cotton Exchange Service)

Season		Carryover Aug. 1	Production	Total Supply	Consumption*	Carryover July 31
1920–21	..	11,239,000	20,195,000	31,434,000	17,045,000	14,389,000
1921–22	..	14,389,000	15,165,000	29,554,000	19,525,000	10,029,000
1922–23	..	10,029,000	18,173,000	28,202,000	21,387,000	6,815,000
1923–24	..	6,815,000	19,087,000	25,902,000	20,035,000	5,867,000
1924–25	..	5,867,000	24,110,000	29,977,000	23,025,000	6,952,000
1925–26	..	6,952,000	26,580,000	33,532,000	24,047,000	9,485,000
1926–27	..	9,485,000	27,804,000	37,289,000	25,650,000	11,639,000
1927–28	..	11,639,000	23,307,000	34,946,000	25,428,000	9,518,000
1928–29	..	9,518,000	25,670,000	35,188,000	25,821,000	9,367,000
1929–30	..	9,367,000	26,597,000	35,964,000	24,851,000	11,113,000
1930–31	..	11,113,000	25,190,000	36,303,000	22,357,000	13,946,000
1931–32	..	13,946,000	26,535,000	40,481,000	22,974,000	17,507,000
1932–33	..	17,507,000	21,733,000†	39,240,000†		

*Includes a very small amount of cotton destroyed. † Preliminary.

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WORLD PRODUCTION OF ALL KINDS OF COTTON.

Season	American Cotton	Egyptian Cotton	Indian Cotton	Sundry Cotton	All Cottons
1920 21	13,664 000	1 196 000	3,250,000	2 085,000	20,195,000
1921 22	8,285 000	1 059 000	3 668 000	2,153,000	15,165,000
1922 23	10,124,000	1 143 000	4,240,000	2 666,000	18,173,000
1923 24	10,330 000	1,309 000	4 282 000	3 166,000	19,087,000
1924 25	14 006,000	1 459,000	4,736,000	3,909,000	24,110,000
1925 26	16,181,000	1,711,000	4,578,000	4,110,000	26,580,000
1926 27	18,162,000	1,628,000	4,002,000	4,012,000	27,804,000
1927 28	12 957,000	1,242,000	4,489,000	4,619,000	23,307,000
1928–29	14 555,000	1,649,000	4,719,000	4,747,000	25,670,000
1929 30	14 716,000	1,742,000	4,978,000	5,161,000	26,597,000
1930 31	13,873,000	1,693,000	4,585,000	5,039,000	25,190,000
1931 32	16 877 000	1 307,000	3,334,000	5,017,000	26,535,000
1932 33†	11 432,000	900,000	4 000 000	5,401,000	21,733,000

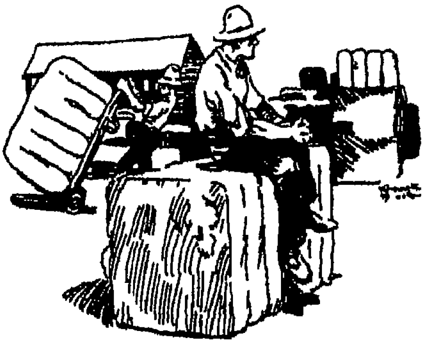
† Preliminary.

ESTIMATED PRODUCTION OF RAYON YARN.

BY COUNTRIES AND PROCESSES IN THOUSANDS OF LBS
FIRST SIX MONTHS OF 1932

(Compiled by the Textile and Engineering Press Bureau, Limited)

Country	Viscose	Acetate	Cupra	Collodion	Total
Belgium	4 400	275		–	4,675
Brazil	275	80			355
Britain	30,520	7,090	440		38,050
Canada	2,815	715			3,530
Czecho-Slovakia	1,965	—			1,965
France	16 665	1,550			18,215
Germany	22,195	1,230	3,225		26,650
Holland	8,150	—		—	8,150
Italy	36,305	1,025	880	–	38,210
Japan	27,920	—	1,385		29,305
Poland	3,210	—	–	—	3,210
Spain	3,080	—	—	–	3,080
Sweden	155	–	-	—	155
Switzerland	5,455	220	—	—	5,675
United States	45,565	7,185	1,875	2,170	56,795
Total	208,675	19,370	7,805	2,170	238,020



Reviews on Current Cotton Literature.

'TECHNOLOGICAL REPORTS ON STANDARD INDIAN COTTONS, 1932, by Nazir Ahmad, M Sc, Ph D, Director Technological Laboratory, Matunga, Bombay, published by the Indian Central Cotton Committee, Bombay, at Rs 2

The term "Standard Indian Cottons is applied to certain improved varieties of cotton which are steadily replacing the older varieties in different parts of India, and which at present cover some 15 per cent of the total area under cotton cultivation It is the practice at the Technological Laboratory to subject the standard cottons of each season to a very thorough test for their fibre properties and yarn characteristics The technological reports included in the present bulletin contain the detailed results of these tests on standard cottons of nine seasons, viz, 1923 32, together with the agricultural details, the grader's valuation reports and the spinning master's report on each cotton, while the objects, technique and salient features of the various tests are described in the introduction Complete information as regards the details of machinery, treatment, waste percentages, yarn breakages, and the physical conditions prevailing in the laboratory is also given in the reports The general plan followed in each report is the same as in the past years with the following difference Last year values of the work of rupture of a lea, as found by the ballistic method, were included for the first time This year a new statistic, called "fibre-length irregularity, has been introduced, which should be regarded as a measure of the percentage of short fibres present in a cotton

This bulletin should prove valuable to those spinners using Indian cotton and those desiring to find an Indian cotton the quality of which will suit their requirements

"THE COTTON INDUSTRY AND TRADE IN CHINA," by H D Fong, Ph D Published by the Nankai Institute of Economics, Nankai University, Tientsin, China

A most exhaustive and thorough description of the many and varied phases of China's cotton industry, this publication should be of the greatest interest to large numbers of cotton men and others who are studying the phenomenal advance made by the Chinese cotton trade in recent years The author deals effectually and at length with both the raw cotton and the cotton-manufacturing sides of the trade, under such headings as cotton production and consumption, manufacturing and marketing, labour conditions, labour organization and welfare work, industrial organization, import and export, etc Mr Fong supplements his work by a large number of statistical data relevant thereto

"THE YORKSHIRE TEXTILE INDUSTRY," incorporating 'The Yorkshire Textile Directory" 48th edition Published by John Worrall Ltd, Oldham Price 15s net, post free abroad, 17s net

A very comprehensive directory of the cotton and woollen industries, bleachers, dyers, finishers, etc, situated in Yorkshire Information is also given regarding the approximate number of spindles and looms, and also regarding pay days, holidays, etc., in the chief towns. A new feature is the editorial supplement dealing in the main with new machinery, accessories, improvements, etc., recently introduced by various firms.

'ANNUAL COTTON HANDBOOK,' published by Comtelburo Ltd., 11, Tokenhouse Yard, London, E.C.2. Price, cloth, 5s. 2d. net (post free).

The sixty-second edition of this most useful handbook contains its usual mine of information on cotton matters, containing as it does practically every available cotton statistical table published by the cotton trade of the world. The new feature introduced last year, giving the certificated stocks at southern delivery points, is maintained, and previous season's figures kept standing, so that a comparison is now available between the two past seasons. Certain minor features have had to be omitted owing to the figures no longer being issued, but all other statistics are maintained, and have been revised and brought up to date in accordance with the latest details available. The handbook is international in its details, statistics being provided for every cotton-producing country in the world.

"DAVISON'S TEXTILE BLUE BOOK, 1932." Published by the Davison Publishing Co., 30, Union Square, New York. The sixty seventh annual edition of this directory has come to hand. Interesting features are the statistics arranged by states, showing the number of spindles, looms, cards and combers in the mills, textile associations, index to cotton merchants, etc., etc. Prices: Office edition, $7.50, handy edition, $5. Salesmen's Directory (mills only), $4, (foreign countries, 50 cents extra).

"MECHANICAL FABRICS," by George B. Haven, Textile Research Department, Massachusetts Institute of Technology. Published by Chapman & Hall Ltd., 11, Henrietta Street, London, W.C.2. Price 62s. 6d. net.

This exceptionally interesting and highly instructive work should prove especially useful to all textile research and laboratory workers, textile manufacturers and students.

The expanding use of strong textile fibres as a basis of strength in many mechanical members such as automobile tyres, gas bags for balloons, hose piping, and belting, together with an extended array of other uses, has called for an accuracy in specification and manufacture which was not known a few years ago. The uses to which these fabrics are put have given rise to the current term "mechanical fabrics." The problem in the manufacture of these materials is totally different from that of fabrics for clothing.

The serious application of scientific test methods to mechanical fabrics is of very recent origin. There is no reason, however, why mechanical fabrics should not be subjected to just as rigid tests and specifications as are other constructive materials, such as iron, steel, cement and timber. The great improvement in pneumatic tyres since 1915 has been largely the result of accurate laboratory methods combined with correct manufacturing conditions. Every modern manufacturing enterprise, especially if of a textile character, presents numerous questions for research. The working out of these questions thoroughly and completely has resulted in great economies for the manufacturer and a vastly improved product for the consumer

This volume has been written with the hope of clarifying and making of the utmost directness the methods to be employed in handling textile research A constant endeavour appears to have been made to explain and illustrate all questions in a comprehensible manner and suitable to commercial requirements

By means of this book any textile manufacturing plant should be able to design its own laboratory and put into full effect all necessary equipment and apparatus for fabric determinations The increasing demands of accuracy and refinement in textile manufacturing demand the use of laboratory methods in the control of production, the character of the result and the interpretation of specifications The researches and moisture effects in practically all types of fibres are extensive and thorough, and as a summary there are added many tables whereby fabrics may be corrected to known and standard degrees of moisture regain Actual drawings are presented for many types of apparatus, as well as laboratory floor plans and materials An extensive chapter is added discussing the organization of typical textile processes this is carried out from actual data

The following are some of the headings under which the author treats his subject Types of mechanical fabrics, manipulation of cotton fibre in manufacture, textile laboratory practice, textile microscopy, textile mill organization, arrangement and driving of textile machinery

The whole work comprises 913 well printed pages, wherein are included some 366 diagrams

"THE EMPIRE COTTON GROWING REVIEW," published quarterly by P S King & Son Ltd , London S W 1, for the Empire Cotton Growing Corporation, price 1s

The current issue of this *Review* (October, 1932) contains a number of interesting and instructive articles, chief amongst which are the following Spinning Tests, Agriculture as an Industry, Black-arm in the Gezira (Season 1931-32) The Acclimatization of Cottons in New Areas, A South African Farming Chronicle

OTHER BOOKS RECEIVED

"WELTWIRTSCHAFTLICHES ARCHIV," by Dr sc pol Bernhard Harms Published by Gustav Fischer, Jena

"ECONOMIC CONDITIONS IN PORTUGAL" Published by H M Stationery Office for the Department of Overseas Trade

"ECONOMIC CONDITIONS IN EAST AFRICA AND IN NORTHERN RHODESIA AND NYASALAND, 1930-1932" Report by H M Senior Trade Commissioner in East Africa with the assistance of H M Trade Commissioner and Imperial Trade Correspondents Published for the Department of Overseas Trade by H M Stationery Office Price 2s 9d net

"ECONOMIC CONDITIONS IN ROUMANIA IN 1931" Report by the Commercial Secretary to H M Legation in Bucharest Published for the Department of Overseas Trade by H M Stationery Office Price 2s 6d net

"INDIAN COTTON REVIEW," Season 1931-32, published by Chunilal Mehta & Co , 51, Marwari Bazar, Bombay

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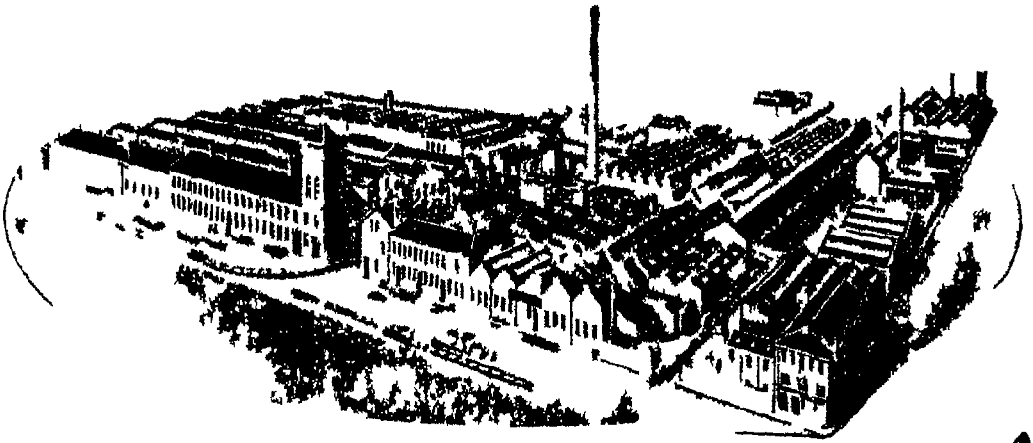

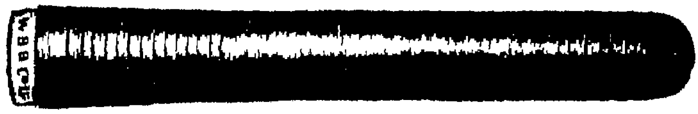

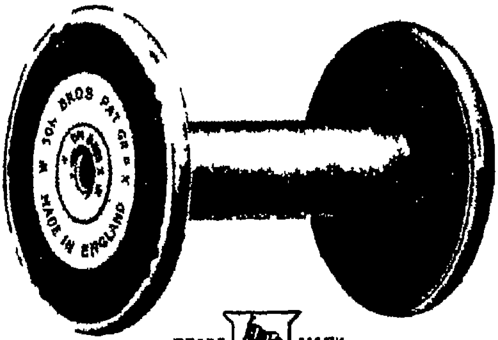

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(2) "*On a recent visit to ——— Mill Mr ——— went through the mill and saw the Meynell W T Roller at work on client's Intermediates (he had scrapped Rovings) and on Ringframes Client stated that he is well satisfied with the results from Meynell W T Roller and that he is getting a stronger yarn from his 4 line system SINCE HE FITTED SAME WITH MEYNELL'S W T ROLLER although he increased the draft from 13 to 16 The yarn spun was 21s from a 1 3 Hank Inter from a mixing of Congo, Omrah and low short-staple American Client expressed himself as particularly pleased with the Meynell W T Roller on the Intermediate frames, as apart from the saving in covering for the second and third lines, the minding of the frames was simpler owing to the absence of weights*

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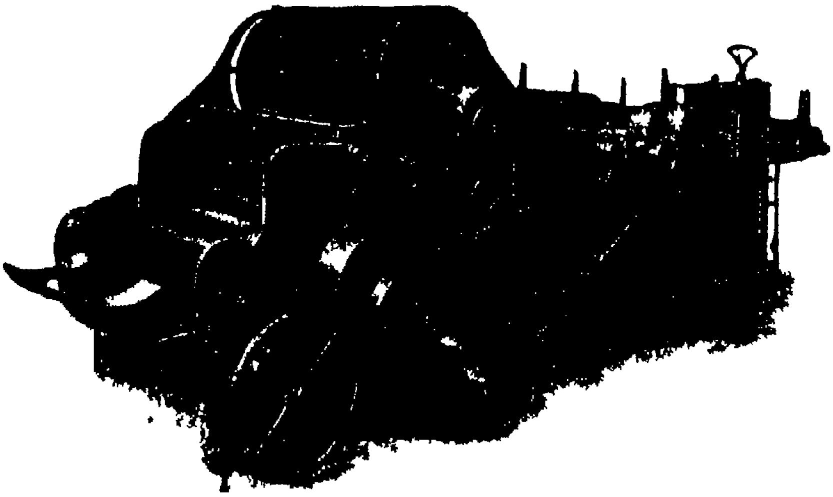

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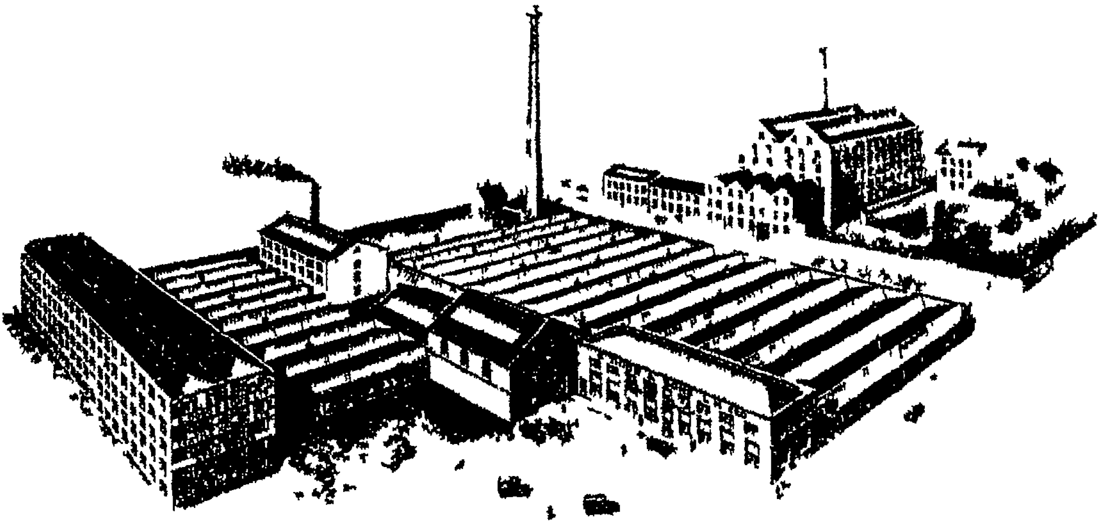

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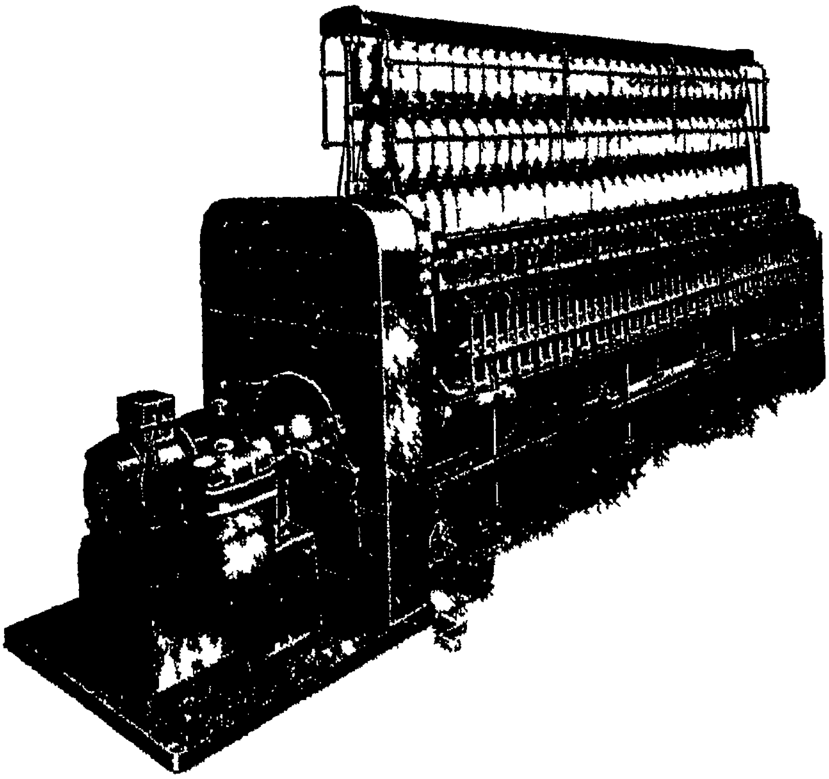

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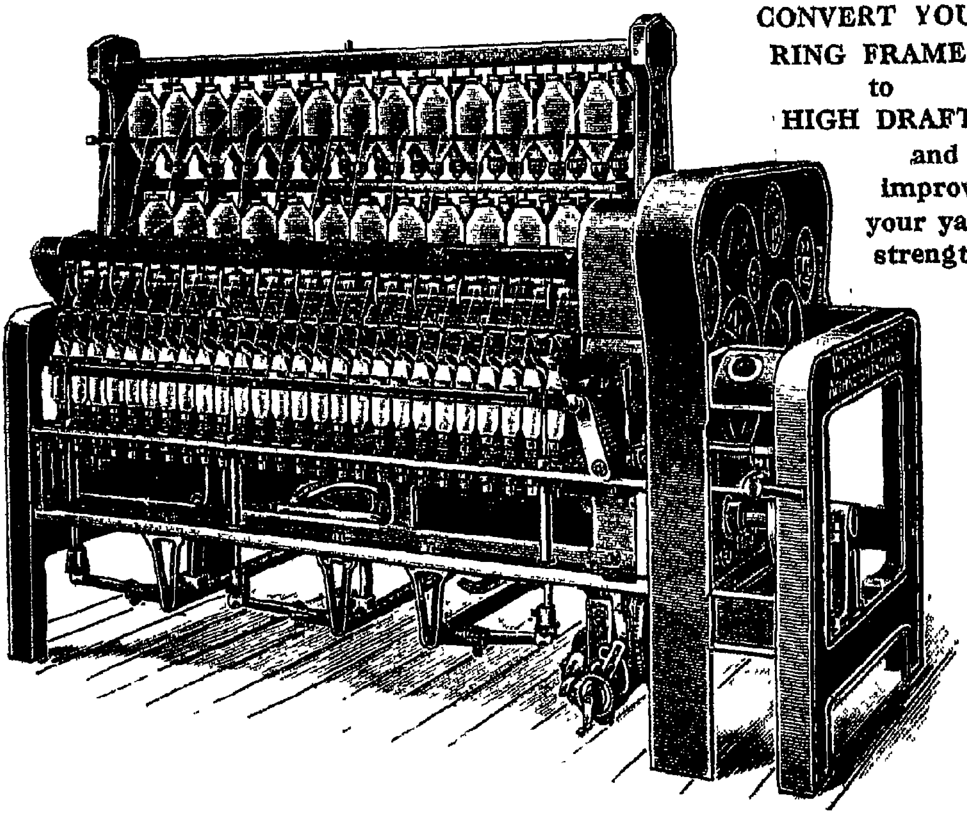

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Patent Cylinder Stripping Eliminator for Flat Cards.
Patent Licker-in Repairing Outfit for Flat Cards.
Patent Chain Drive to bobbin shaft of " Speed " Frames.
Patent Tape Drive to Ring Spinning and Doubling Spindles.
H. & B.'s Four-Roller Arrangement for " High Draft."
Ring Spindle with patent polygon spring and hoop.
Patent Combined Holder Brake.
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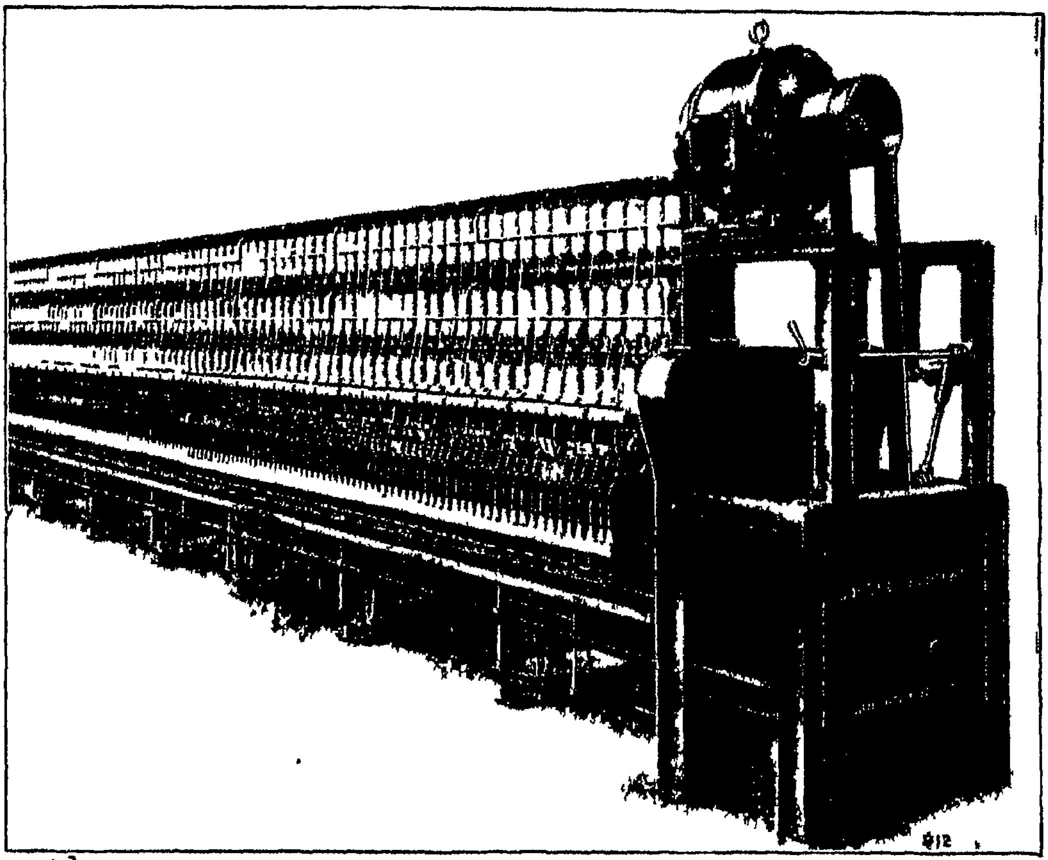

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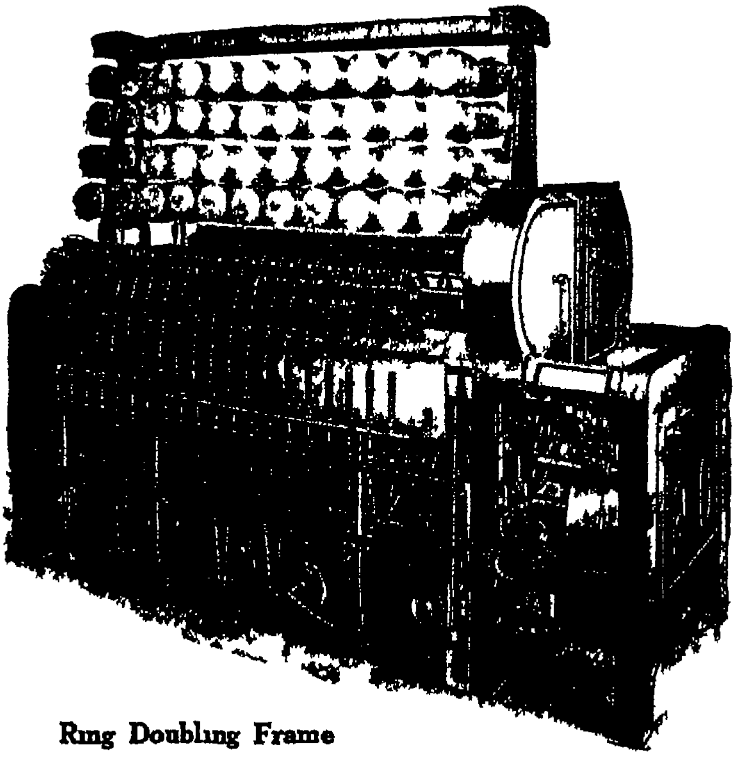

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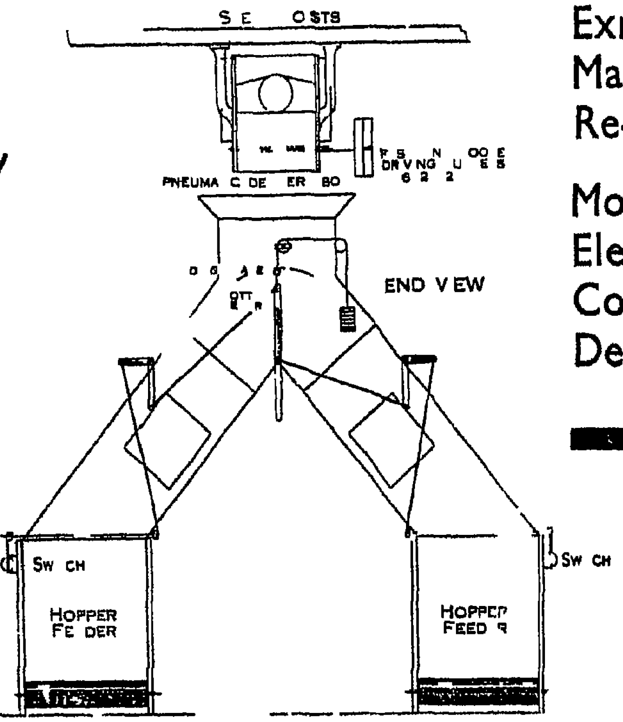

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(VOL. XI, No. 42)

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	PAGE
Alexandria Commercial Co.	214
American Cotton Co-operative Association	*front cover*
Anderson, Clayton & Co.	190
Brooks & Doxey Ltd. ...	294
"Commerce & Finance" . .	250
Cook, Thos., & Son, Ltd....	259
Courtaulds Ltd.,	*outside back cover*
Cotton Export Co. "Missr" Ltd.	*inside back cover*
Dixon, R. L., & Brother ...	197
Dobson & Barlow, Ltd. . .	292
Dodd, S., & Sons	208
Eggerichs, Franz Emil ..	223
François, L. F., & Cie . .	197
Hetherington, John, & Sons	295
Howard & Bullough, Ltd.	291
Lees, Asa, & Co., Ltd. ...	293
Lord Bros., Ltd.	294
Marsden, C. W., Ltd. ...	228
Meynell, Henry & Co. ...	296
Munds, Winslow & Potter	201
Platt Bros. & Co., Ltd. ...	200
Reinhart & Co.	213
Reynolds & Gibson... .	197
Rieter & Co., Joh. Jacob ...	234
Scholten's, W. A., Chemical Works, Ltd. ...	228, 234
Skinner, Thos., & Co. ...	180
Société Alsacienne de Constructions Mechaniques	252
Standard Marine Insurance Co.	207
Taylor, Lang & Co., Ltd....	184
Textile Development Co.	233
"Textile, La," Société Co-operative	184
Textile Paper Tube Co., Ltd.	180
Tweedales & Smalley (1920), Ltd.	297
Universal Winding Co. ...	241
Weld & Co.	214
Wilson Bros. Bobbin Co., Ltd.	289
Worrall, John, Ltd. . .	252

CONTENTS

VOL. XI, No. 42.

PAGE

WILLIAM HOWARTH, J.P. 163–165

STATE OF TRADE REPORTS 166–179

Austria, 166; Belgium, 170; Czecho-Slovakia, 170; England, 172; France, 172; Germany, 174; Holland, 175; Hungary, 175; Italy, 176; Japan, 176; Spain, 177; Switzerland, 178; U.S.A., 179, 277.

COTTON GROWING 180–189

Australia, 181; Belgian Congo, 181; China, 192; Fiji, 182; French Indo-China, 183; Haiti, 183; Iraq, 183; Manchukuo, 185; Nyasaland, 185; Peru, 185; Puerto Rico, 185; Soviet Russia, 185; Spain, 186; St. Vincent, 187; Sudan, 187; Tanganyika, 187; Togo, 187; Uganda, 188; Production, Acreage and Crop Conditions, 188

AMERICAN COTTON 190–207

Cotton Report 1st December, 1932, 191; Boll-weevil in 1932, 192; Poor Baling of American Cotton, 193; Grade and Staple Report, 194; South Carolina Experiments, 195; Crop Allotment Plan, 196; U.S. Cotton Exchanges, 198; Colonel H. G. Hester, 200; Raw Cotton Exports, 201; Mechanical Cotton Picking Development, 202; Pink Boll-worm Damage in Texas, 202; New Variety of Long-Staple Cotton, 204; Acreage Prospects for 1933, 205; Consumption of American Cotton, Estimate for 1932-3, 206; Crop Reports, 207; The Allotment Plan, 271; Additional Red Cross Cotton, 275; U.S. National Cotton Week, 277; U.S.A. State of Trade, 277; American Ginning Report to 16th January, 1933, 278.

EGYPTIAN COTTON 208–217

Government Crop Estimate, 209; The Possibilities of Gizeh 7, 209; Crop Reports, 209; Egyptian Cotton Botanist for U.S.S.R., 210; Egyptian Cotton Consumed in the United States, 210; Market Reports, 211; Errata, 217.

EAST INDIAN COTTON... 218–224

Crop Forecasts, 218; Adulteration of Indian Cotton, 220; Indian Cotton Enquiry Committee, 222; Lancashire and Indian Cotton, 222;

INTERNATIONAL COTTON CONFERENCE, PRAGUE ...225–227

TECHNICAL SECTION 228–251

Mule Yarn on Ring Frame, 229; Relationship between the Lea Test and the Single Thread Test, 232; Ring and Traveller Designs and Speeds, 235; New Ball-Drag Shuttle, 245; Sizing, Finishing and Printing Materials, 246.

COTTON MILL NOTES 252–270

Agreement on More-looms-to-a-weaver System in Lancashire, 253; Cotton Spinning in Kiangsu Province, 256; The Knitting Industry in Shanghai and Tientsin, 262; Cotton Wages in China, 263; The Textile Industry in Soviet Russia, 263; Soviet Russia, 266; Hungary, 266; India and Fine Goods Production, 267; Poland, 267; Esthonian Import Duty on Raw Cotton, 268; Japan, 268; The Bombay Mill Owners' Annual Statement, 269.

MISCELLANEOUS 271–280

The Allotment Plan, 271; Additional Red Cross Cotton, 275; China, Second Cotton Estimate, 276; Cotton Harvesting Machines, 276; U.S. National Cotton Week, 277; U.S.A. State of Trade, 277; American Ginning Report to 16th January, 1933, 278; Manchester Cotton Association's New President, 278; Average weights of Cotton Handled in U.S.A., 279; Obituary: Mr. John Smethurst, 279; Mr. Henry Roberts, 280; Mr. A. E. Hakanson, 280.

COTTON TRADE STATISTICS 281–286

England, Yarn Exports, 281; India, Imports and Exports, 284; U.S.A., Cotton Consumption, 286.

REVIEWS ON CURRENT COTTON LITERATURE 286–288

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WILLIAM HOWARTH, J.P.

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William Howarth, J.P.

"I have fought a good fight,
"I have finished my course,
"I have kept the faith."

THESE words of St. Paul are singularly appropriate to our departed brother and friend, William Howarth. His was an uphill fight from beginning to end. And what a fighter he was. Even those whom he had at times to oppose would be the first to pay homage to his sterling and courageous qualities of mind and leadership.

He always kept before him the Greek ideal: "A speaker of words, and a doer of deeds."

Philosophic to a degree he faced every duty assigned to him with statesmanlike dignity and deliberation. His ability was unquestionable. At the same time, he made a great point of being sure of his facts before undertaking any task.

But the power behind his tremendous driving force had first to be generated. From early days as a little piecer in the mill he availed himself of every opportunity for education and self-improvement. Much time and energy were expended after the normal day's work was over in accumulating the unpurchasable wealth of learning. He thus acquired a unique storehouse of general information, and there were very few subjects upon which he could not discourse in a praiseworthy manner.

In the particular field of cotton spinning, however, it is bare justice to state that there was no man better grounded or more competent to deal with its complexities and ramifications than William Howarth. Indeed, he was acquainted with the Alpha and Omega of its mysteries. Whenever points arose on either the government of mills or the customs and usages of the trade Mr. Howarth's knowledge was incontrovertible.

In legislative matters especially he was a tower of strength as Chairman of the Federation Parliamentary Committee. His worth and work as chief witness of the Federation before many Government Committees of Inquiry into the trade are gratefully remembered. His sagacity and physical endurance on these occasions evoked unstinted acknowledgment on all hands. In earning distinction for himself he also placed credit to the organization he so ably represented.

As a mathematician he stood in the foremost rank. This was amply demonstrated by the comparative ease with which he dealt successfully with the difficult spinning calculations submitted at the test examination which secured for him the Secretaryship of the Amalgamated Association of Operative Cotton Spinners in 1902. In this connection it is recalled that, having formerly served the interests of the operatives, he had, as Geo. J. Holyoake says, " warmed his hands at both sides of the industry."

It is now a matter of history how by dint of perseverance and application William Howarth rose steadily to occupy the high office of Managing Director of the Fine Cotton Spinners' and Doublers' Association, and how in his own characteristic manner he lengthened his cords and strengthened his stakes in other spheres of activity. Actually he became an indispensable representative of the Federation, not merely on organizations connected with the cotton industry but on national governing bodies of industrialists. In public and private life he occupied many more offices, all of which he adorned.

The movement of cotton-growing within the Empire on a commercial basis ever found in him an ardent supporter, and it is a striking testimony to his zeal in fostering the extension of cotton-growing that some time prior to his death he resigned from every executive position he held except his membership of the Executive of the British Cotton Growing Association, of which he was a founder.

Mr. Howarth was an invaluable asset to the International Federation of Master Cotton Spinners' and Manufacturers' Associations, to the Presidency of which he aspired nearly twelve months ago. He was an ideal international representative whose opinions and counsel were highly esteemed by his colleagues on the General Committee. He was a familiar figure at International Congresses, and invariably enriched the proceedings by his practical contributions and suggestions.

Mainly through his influence and determination, the Joint Egyptian Cotton Committee under the auspices of the International Federation was set up. The work already accomplished is due in no small measure to the manifestation of his lofty motives and unselfish endeavours in the interests of both growers and spinners of Egyptian cotton.

It is not putting it too high to state that had it not been for William Howarth there would not have been in existence to-day an agreement governing the question of moisture content in Egyptian cotton, to which the deceased attached great importance.

This appreciation is not an attempt to do more than indicate briefly some of the exceptional qualities which belonged to Mr. Howarth. It would require many more pages of the BULLETIN to produce an adequate estimate of him. One thing is certain. The cotton trade of the world, and especially Great Britain, is distinctly poorer by his death, which took place in his 62nd year, on the 13th January.

Those who knew him best loved him most, and all associated with the cotton industry will echo the tribute paid by Mr. Fred Mills, J.P., President of the English Federation, when he said: "We have lost not only a highly valued colleague and counsellor, but a sincere friend and helper."

The sincere condolences of all go out to the widow and family in their irreparable loss.

Mr. Howarth has finished his course, and, above all, he has kept the faith. May he rest in peace.

JOHN POGSON.

AUSTRIA.

SPINNING SECTION.

Conditions in the Austrian cotton-spinning industry have become more unfavourable during the last few months.

The orders on hand have decreased by 12 per cent. since autumn of 1932, and production is at present approximately 60 per cent. of normal full-time production. At present 64 per cent. of the spindles are working, but the majority of these are on short time. During the period from January to November, 1932, imports of cotton yarn were as follows:—

	1932		1931
	q		q.
Grey	14,955		14,401
Bleached	1,845		1,877
Dyed	2,867		3,224
Fancy yarns	219		—
	19,886	against	19,502

According to the above figures, the imports of yarns do not appear to have fallen, in spite of the reduction in consumption and the smaller production of the making-up industry; on the other hand, they have risen to a small extent.

Exports of cotton yarn for the same period are as follows:—

	1932		1931
	q.		q.
Grey	20,718		27,304
Bleached	1,949		4,292
Dyed	1,036		1,534
	23,703	against	33,130

The reduction in cotton yarn exports is therefore 9,427 quintals, or 39.7 per cent., which, together with the steady imports of yarn and the marked reduction in the demand from the home markets, has led to the deterioration of the position. The outlook for the near future, we regret to say, is unafvourable, especially in view of the fact that the cotton goods trade does not offer any signs of improvement. At the same time, it should further be taken into account that an increased reduction in consumption will take place for the reason that the number of unemployed in the country is gradually increasing, for the movement in favour of the reduction of wages in private and public establishments is still continuing, with the result that the buying power of the population is expected to sink still further.

With regard to the wages in the cotton-spinning industry, there has been no important alteration in the last few months. This is due to the fact that a great deal of short time has been worked.

WEAVING SECTION.

The conditions already mentioned above also apply to the situation in the weaving section. In spite of the fact that stocks of cotton goods in the country are extremely low, the present degree of occupation in the weaving industry has declined to nearly 50 per cent. of full capacity. This reduced production can only be sold at very unremunerative prices, due to the increasing competition of the weaving mills and to the small number of orders being received. The imports of cotton goods for the period from January to November are as follows:—

	1932 q.		1931 q.
Grey	22,804		35,739
Bleached	4,090		7,797
Dyed	3,103		6,807
Printed	1,491		5,296
Coloured woven	5,623		17,252
	37,111	against	72,891

The reduction in imports of cotton goods is shown as 35,780 quintals, or 49 per cent., which corresponds to the reduction in consumer takings. The total import of 37,000 quintals included 19,672 quintals, or approximately 53 per cent., of cotton goods intended for finishing in this country, foreign goods, entering duty free and re-exported as finished. On the other hand, the exports of cotton goods during the same period, January-November, were as follows:—

	1932 q.		1931 q.
Grey	154		111
Bleached	3,432		3,850
Dyed	756		942
Printed	3,838		3,772
Coloured woven	2,358		3,083
	10,542	against	11,758

The largest proportion of the above exports comprise the above-mentioned goods for finishing in this country.

With regard to the prospects for the improvement of the weaving industry in the near future, the remarks already made in regard to the spinning section also apply to the weaving section. The wages in the weaving section during the last few months have not shown any important alteration.

The following is the original report in German:—

1. SPINNEREI.

Die Beschäftigungslage der österreichischen Spinnereien hat sich in den letzten Monaten überaus ungünstig gestaltet. Der Auftragstand ist seit dem Herbst 1932 um rund 12 % gesunken und die Erzeugung ist bei einer Ausnützung von rund 60 % der normalen Kapazitat angelangt. In Betrieb stehen cca. 64 % der Spindeln, welche aber zum grossen Teil nur in Kurzarbeit laufen.

In der Periode Januar/November wurden eingeführt:—

	1932		1931
Baumwollgarne	q.		q.
Roh	14,955		14,401
Gebleicht	1,845		1,877
Gefarbt	2,867		3,224
Effektgarne	219		—
	19,886	gegen	19,502

Demnach ist die Einfuhr von Garnen, ungeachtet des bedeutenden Konsumrückganges in den Erzeugnissen der Nahindustrie nicht gesunken, sondern noch um eine Kleinigkeit gestiegen.

Demgegenüber wurden in der gleichen Periode ausgeführt:—

	1932		1931
Baumwollgarne	q.		q.
Roh	20,718		27,304
Gebleicht	1,949		4,292
Gefarbt	1,036		1,534
	23,703	gegen	33,130

Der Ausfall im Garnexport beträgt sohin 9,427 q., oder 39.7 %, was im Zusammenhang mit der gleichgebliebenen Garneinfuhr und dem bedeutenden Rückgang im Inlandsabsatz zu der bereits erwähnten Verschlechterung der Beschaftigungslage geführt hat. Die Aussichten für die nächste Zukunft konnen leider nur ungünstig beurteilt werden, weil vorerst keine Anhaltspunkte für eine bevorstehende Wiederbelebung des Warenverbrauches gegeben sind. Es muss im Gegenteil mit einer weiteren Einschrumpfung des Konsums gerechnet werden, weil die Arbeitslosigkeit im Inland ständig wächst und weil auch die noch in Beschäftigung stehenden Arbeiter zumeist nur fur eine verkürzte Arbeitszeit entlohnt werden. Gleichzeitig geht die Bewegung der Gehaltskürzungen bei den privaten und offentlichen Angestellten weiter, so dass auch die Kaufkraft dieser Kreise noch weiter sinken muss.

Was die Lohnverhältnisse in der Spinnindustrie betrifft, so wurden in den letzten Monaten keine nennenswerten Aenderungen durchgeführt u.zw. schon deshalb, weil durch die in den meisten Betrieben eingeführte Kurzarbeit ein gleichzeitiger Abbau der Stunden- und Akkordlöhne kaum durchführbar geweben ware.

2. WEBEREI.

Der schon früher erwähnte Rückgang im Konsum von Baumwollerzeugnissen hat auch die Beschäftigungslage der Webereien in empfindlicher Weise beeinträchtigt. Obzwar die im Lande vorhandenen Webstühle den normalen Inlandsbedarf an Geweben nur knapp zu decken vermögen, hat sich die Notwendigkeit ergeben, den Produktionsumfang auf fast 50 % der vollen Kapazität einzuschränken. Diese verringerte Produktion konnte nur zu sehr ungünstigen Preisen abgesetzt werden, was auf den verschäarften Wettbewerb der Betriebe um die jeweils erhältlichen wenigen Aufträge zurücwzuführen ist. Die Einfuhr von Baumwollgeweben in der Zeit Januar/November hat betragen:—

	1932 q.		1931 q.
Roh	22,804		35,739
Gebleicht	4,090		7,797
Gefärbt	3,103		6,807
Bedruckt	1,491		5,296
Buntgewebt	5,623		17,252
	37,111	gegen	72,891

Der Rückgang in der Gewebeinfuhr hat somit 35,780 q., oder 49 % betragen, was ungeführ dem Konsumausfall entsprachen dürfte. Von dem Gesamt-Import per rund 37,000 q., entfielen 19,672 q., oder cca. 52 %, auf den sogenannten Veredlungsverkehr, welcher darin besteht, dass ausländische Gewebe zollfrei eingeführt und nach erfolgter Veredlung, bezw. Konfektionierung wieder ausgeführt werden.

Demgegenüber wurden in Baumwollgeweben in der Periode Januar/November exportiert:—

	1932 q.		1931 q.
Roh	154		111
Gebleicht	3,432		3,850
Gefärbt	756		942
Bedruckt	3,838		3,772
Buntgewebt	2,358		3,083
	10,542	gegen	11,758

Der grösste Teil des im Vorstehenden ausgewiesenen Gewebeexports entfällt auf den bereits erwähnten Veredlungsverkehr, vollzieht sich somit in ausländischen Geweben, welche in Oesterreich nur veredelt werden.

Was die Aussichten für die Entwicklung des Webereigeschäftes in der nächsten Zukunft betrifft, so ist auf die Bemerkungen zu verweisen, welche hinsichtlich der Spinnerei gemacht wurden; demnach ist festzustellen, dass die Aspekte durchaus ungünstig liegen.

Die Arbeiterlöhne haben auch in der Weberei während der letzten Monate keine nennenswerten Veränderungen erfahren.

(Verein der Baumwollspinner und Weber Oesterreichs.)

BELGIUM.

The degree of activity in the Belgian cotton industry can be aproximately measured by the fluctuations in the exports of piece goods The statistics for the first nine months of 1932 show that Belgian exports of cotton piece goods were 36 per cent less (in weight) than the figure for the corresponding period of 1931 It must, however, be remembered that in 1931 the exports of cotton piece goods showed a fall of 30 per cent (in weight) compared with those of 1929

During the last few months, as we indicated in our preceding report, short time in the spinning section has not been quite so extensive as formerly, and activity in this section is being maintained at about 65 per cent of normal productive capacity

The cost of living has risen in Belgium, and, in consequence of this, wages have been readjusted Since the middle of November they have been increased, and stand at the moment at the level of December, 1926, and April, 1932

The original text in French runs as follows —

L'activite dans l industrie cotonniere belge peut se mesurer — au moins approximativement — par les fluctuations des exportations de tissus Les statistiques relatives aux neuf premiers mois de 1932 montrent que les exportations belges de tissus de coton furent de 36 pour cent inferieures (en poids) au chiffre atteint pendant la periode correspondante de 1931 Mais il convient de rappeler ici qu'en 1931, les exportations de tissus etaient en recul de 30 pour cent (en poids) par rapport a celles de 1929

Dans les derniers mois, ainsi que nous l'avons signale dans notre rapport precedent, le chômage des filatures a quelque peu diminue et leur activite se maintient aux environs de 65 pour cent de leur capacite normale de production

Le coût de la vie ayant augmente en Belgique, les salaires ont ete modifies en consequence Depuis la mi-novembre, ils ont ete majores et sont actuellement au niveau qu'ils atteignaient en decembre 1926 et en avril 1932

(*Association Cotonniere de Belgique*)

CZECHO-SLOVAKIA

Activity in the American section reached its lowest point in the first months of the second half-year of 1932, spinners were only able to maintain 45 per cent of their normal capacity Selling activity was very weak, and export business especially was slack The voluntary curtailment of production during the summer months had, however, resulted in a considerable reduction of stocks

A change set in when the spinners' negotiations concerning a uniform division of the inland yarn market and uniform price regulation were brought to a successful conclusion Thus, the end of August saw an increased demand from inland sources for yarns In the last months of the year export business became more lively, so that in the quarter recently concluded the American section was employed to about 60 per cent of its capacity

As already mentioned, prices have been regulated by the agreement Previously these had been so poor that sales could only be made at a loss This is now avoided

The conditions ruling in the Egyptian section were somewhat the same as those of the American section Here also an agreement was responsible for the maintenance of prices at a profitable level The degree of activity in this section remained, on the average, at about 80 per cent of normal during the last quarter

Exports of cotton yarns and manufactured goods, which amounted to about three-fifths of the total production in Czecho-Slovakia during previous years, have so fallen that in the third quarter of last year barely one-half was exported The exports of cotton yarn amounted, in the third quarter of 1932, to 28,300 q , and in the corresponding quarter of 1931 to 50,700 q Still greater was the decline in exports of cotton manufactures In comparison with the third quarter of 1931, this fell from 94,400 q to 31,400 q , i e , by about 66 per cent

Although a slight improvement in export business was experienced during the last quarter of 1932, a fundamental change is still to be awaited The restrictions on imports and exchange measures of the consumer states will have to be removed

With reference to the condition of the cotton-weaving establishments, and also as regards wages, we regret that we are unable to make any report

---

The following is the original text in German

Die Beschaftigung der Amerikaspinnereien hatte in den ersten Monaten des 2 Halljahres 1932 einen Tiefpunkt erreicht, denn die Betriebe konnten ihre Kapazitat nur etwa zu 45 % ausnutzen Die Verkaufstatigkeit war sehr schwach, insbesondere das Exportgeschaft lag vollstandig darnieder Die freiwillige Einschrankung der Betriebestatigkeit in den Sommermonaten erreichte aber doch den Zweck, die Garnlagebestande stark abzubauen

Ein Umschwung trat erst ein, als die Verhandlungen der Spinner uber eine einheitliche Kontinentierung des inlandischen Garnabsatzes und uber eine einheitliche Preisregulierung einen erfolgreichen Abschluss versprachen Dadurch wurde Ende August eine erhohte Nachfrage nach Garnen auf den Inlandsmarkte hervorgerufen, die naturgemass nach Abschluss des erwahnten Uebereinkommens wieder starp abflaute In den letzten Monaten des Jahres belebte sich das Exportgeschaft, sodass im letzten Quartal des Vorjahres ein Beschaftigungsgrad der Amerikaspinnereien von durchschnittlich 60 % erreicht werden konnte

Wie schon erwahnt, werden durch das genannte Uebereinkommen auch die Garnpreise reguliert Vorher waren die Preise so schlecht, dass nur mit Verlust verkauft werden konnte, was nun vermieden wird

Die Entwicklung der Geschaftslage der Makospinnereien war ungefahr die gleiche, wie die der Amerikaspinnereien Auch hier halt ein Uebereinkommen die Garnpreise auf einem gunstigeren Niveau Der Beschaftigungsgrad dieser Spinnereien betrug im letzten Quartal durchschnittlich annahernd 80 % der Normalleistung

Die Ausfuhr den Baumwollgarnen und Waren, die in früheren Jahren etwa 3/5 der Gesamtproduktion der csl. Baumwollindustrie umfasste, ist so zurückgegangen, daas im 3. Quartal des Vorjahres kaum noch die Halfte exportiert wurde. Der Baumwollgarnexport belief sich im 3. Quartal 1932 auf 28,300 q. im gleichen Quartal des Vorjahres noch auf 50,700 q. Noch stärker ist die Verminderung der Baumwollwarenausfuhr. Diese ist gegenüber dem 3. Quartal des Vorjahres von 94,400 q. auf 31,400 q., also um ungefahr 2/3 gesunken.

Obwohl im letzten Quartal eine geringe Besserung des Exportgeschäftes zu verzeichnen sein dürfte, ist eine grundlegende Wendung erst dann zu erwarten, bis die Einfuhrbeschrankungen und Wahrungsmassnahmen der Abnehmerstaaten beseitigt sein werden.

Bezüglich der Geschaftslage der Baumwollwebereien sowie über Lohnangelegenheiten liegen uns leider keine Daten vor.

(*Hospodarsky Svaz Csl. Pradelen Bavlny.*)

ENGLAND.

At the close of the last quarter of the year 1932 the cotton-spinning industry, whilst showing little change compared with the immediately preceding period, indicated that the tone generally was better, although increased business was lacking. Everyone is awaiting an improvement in world conditions and the removal of many of the financial and other restrictions which hamper trade. Production reached approximately 75 per cent. of normal in mills which were at work, but many concerns are indefinitely stopped.

As a result of protracted negotiations a settlement of the wages question was arrived at, amounting to a reduction of 14 per cent. on current wages in the spinning department and 15½ per cent. in the manufacturing branches.

At long last an agreement has been reached in connection with the more-looms-to-a-weaver system, which should be of benefit to both employers and employed.

FRANCE.

During the course of the last quarter of 1932 a slight improvement in the state of trade was visible, and the year 1933 promises to be a little better in this respect than its predecessor. At the same time, this improvement has not had its full repercussion upon prices which remain mediocre.

The extent of short-time working is noticeably less, and will, it is hoped, continue to show a further slight diminution during the first quarter of 1933. According to recent statistics, giving a résumé of the state of trade at the end of November last, the percentage of full capacity being worked was fixed at about 68 per cent. for the spinning section, 64 per cent. for the doubling section, and 79 per cent. for the weaving section.

No general modification in wages has taken place since the publication of the last issue of THE INTERNATIONAL COTTON BULLETIN. In this connection the only change has been a wages reduction of 5 per cent. which has been put into operation in Normandy.

COMMERCE EXTERIEUR
(FOREIGN COMMERCE)

	2ème trimestre 1932 (*2nd quarter*)	3ème trimestre 1932 (*3rd quarter*)
	Quintaux Métriques (*Metric quintals*)	
A—Importations : (*Imports*)		
1. Fils de coton .. .. (*Cotton yarn*)	1,710	1,519
2. Tissus de coton et autres articles manufacturés (*Cotton cloth and other manufactured goods*)	4,306	3,111
B—Exportations : (*Exports*)		
1. Fils de coton, exportations totales .. (*Cotton yarn—total exports*)	19,224	16,979
Destinations :		
Algerie, Colonies françaises et pays de protectorat .. .. *Algeria, French Colonies and protectorate countries*)	2,796	3,410
Marchés étrangers .. .. (*Foreign markets*)	14,442	13,569
2. Tissus de coton et autres articles manufacturés, exportations totales .. .. (*Cotton cloth and other manufactured goods —total exports*)	91,862	105,669
Destinations :		
Algerie, Colonies françaises et pays de protectorat .. .. (*Algeria, French colonies and protectorate countries*)	68,098	83,216
Marchés étrangers .. .. (*Foreign markets*)	23,764	22,453

The following is the original report in French:—

Au cours du dernier trimestre 1932 on a pu constater une légère amélioration de la situation et l'année 1933 paraît s'annoncer un peu moins mauvaise que la précédente. — Toutefois cette amélioration n'a pas eu sa pleine répercussion sur les prix qui continuent à être médiocres.

Le chômage est en régression assez marquée et continuera vraisemblablement à diminuer encore un peu au cours du premier trimestre 1933. D'après les dernières statistiques établies qui résument la situation à la fin de Novembre, le pourcentage d'activité des unités de production est d'environ 68 pour cent pour la filature, 64 pour cent pour le retordage et 79 pour cent pour le tissage.

Aucune modification générale de salaires n'est intervenue depuis la publication du dernier BULLETIN. Nous n'avons à signaler qu'une réduction de 5 pour cent du salaire effectif réalisée dans la région normande.

(*Syndicat Général de l'Industrie Cotonnière Française.*)

GERMANY.

In spite of the downward tendency of cotton prices which had already begun in September, the sales activity in the cotton spinning industry remained the same at the beginning of the quarter as in the preceding month. There was even a slight tendency towards an increase in new orders. However, as the quarter proceeded, yarn users showed a tendency to decrease their takings, due to fluctuations in the cotton market and the disturbed political conditions. Under these circumstances an improvement in the totally unsatisfactory spinning margins was impossible. At first, the degree of activity was maintained owing to the orders outstanding from previous months, and even showed some increase, it fell again, however, towards the end of the year.

The following is the original report in German :—

Trotz der Abwartsbewegung der Baumwollpreise, die bereits im September begonnen hatte, hielt sich zu Beginn des IV. Quartals die Verkaufstatigkeit der Baumwollspinnereien im allgemeinen im Rahmen des Vormonates, zum Teil war sogar eine, wenn auch geringe Zunahme von Neuauftragen zu verzeichnen. Im weiteren Verlauf des Quartals beobachteten die Garnverbraucher jedoch infolge der Schwankungen des Baumwollmarktes und der Ungeklartheit der politischen Verhaltnisse eine zunehmende Zuruckhaltung. Unter diesen Umstanden war auch eine Aufbesserung der absolut unzulanglichen Spinnmarge nicht zu erreichen. Der Beschaftigungsgrad konnte wegen der aus den fruheren Monaten vorhandenen Auftragsbestande zunachst in der bisherigen Hohe aufrecht erhalten, zum Teil noch etwas erhoht werden, er ging aber Ende des Jahres wieder zuruck.

(*Arbeitsausschuss der Deutschen Baumwollspinnerverbande.*)

WEAVING SECTION.

The increase in business brought about by the higher price of the raw material last September did not continue into the last quarter of 1932. The receipt of new orders has decreased, especially towards the end of the quarter.

On the whole, the degree of activity during the last quarter has been slightly higher than in the third quarter, but it had a slight set-back towards the end of the year. Towards the end of the year 80 per cent. of full time was being worked. Prices have been, as before, entirely insufficient and unsatisfactory.

The original text in German follows :—

Die unter dem Einfluss der Steigerung der Rohstoffpreise im September 1932 eingetretene Geschaftsbelebung hat im 4. Quartal nicht angehalten. Der Neueingang an Auftragen hat insbesondere gegen Ende des 4. Quartals nachgelassen. Der Beschaftigungsgrad war im allgemeinen im Durchschnitt des 4. Quartals etwas hoher als im 3. Quartal 1932, ging aber gegen Ende des Jahres weider zurück. Er beträgt gegen Ende des Quartals etwa 80 % der vollen Kapazität. Die Gewebepreise sind nach wie vor unzulänglich und unbefriedigend.

(*Verein Süddeutscher Baumwollindustrieller.*)

HOLLAND.

Conditions in the spinning section of the trade are still very poor. The demand remains small and most mills are working short time, while the competition on the local market is very severe, and prices are consequently very bad indeed.

The news from the weaving section is not very much better. The demand from the home trade is diminishing on account of the great depression in the agricultural districts, and the great number of the unemployed over the whole country. As regards the export markets, the difficulties are greater than ever, and still more countries are increasing their import duties and colonies allowing preferential treatment to their own countries.

The outlook seems very black indeed, and at present there appears to be no sign of any improvement.

HUNGARY.

The situation in the Hungarian cotton industry has not altered very much recently. The cotton-spinning mills are working more or less at full capacity, although they are carrying practically no raw cotton reserve, so that it remains an open question when and in what degree short-time working should be instituted.

The cotton-weaving section is working at approximately 70 per cent. of full capacity.

The import and export figures for the first nine months of 1932 are given below:—

IMPORTS IN QUINTALS.

Raw Cotton	120,803
Cotton Yarn	6,809
Cotton Cloth	6,380

EXPORTS IN QUINTALS.

Cotton Yarn	77
Cotton Cloth (for the most part printed)	5,891

Die Lage der ungarischen Baumwollindustrie hat sich in der letzten Zeit wesentlich nicht verändert. Die Spinnereien arbeiten z.Z. zwar mit vollem Betrieb, doch verflügen sie über absolut keine Rohbaumwollreserven, so dass es eine offene Frage bleibt, wann und in welchem Masses zu Betriebseinschränkungen oder Einstellungen kommen wird. Die Baumwollwebereien arbeiten mit cca. 70 % ihrer Kapazatät.

Ueber die ersten 9 Monate ds.J. sind die folgenden wichtigeren Aussenhandelsdaten zu verzeichnen:—

EINFUHR IN Q.	
Rohbaumwolle	120,803
Baumwollgarne	6,809
Baumwollgewebe	6,380

AUSFUHR IN Q.	
Baumwollgarne	77
Baumwollgewebe (grosstenteils bedruckte)	5,891

(*Landsverein der Ungarischen Textilindustriellen.*)

ITALY.

During the last three months of 1932 the situation of the Italian cotton industry has improved according to expectations, activity compared with the previous three months being in most cases slightly higher as far as production is concerned.

No important change is to be recorded as regards degree of activity or in rates of wages.

The export situation to the 31st October was as follows:—

		1931	1932
Spinners	Q li.	233,000	242,000
Weavers	„	346,000	305,000
Totals	„	579,000	547,000

(*Associazione Italiana Fascista degli Industriali Cotonieri.*)

JAPAN.

According to a report published recently by the Japan Textile Association, the Japanese cotton-spinning industry will curtail short-time working by 5 per cent., commencing January, 1933.

The exports of cotton piece goods for the ten months ending October, 1932, totalled 668,191,000 yards, and were 139.8 per cent. in excess of those of 1931.

Japan's trade with the Dutch East Indies, the Straits Settlements, the Phillippines, Siam, French Indo-China and British Borneo for the first six months of this year amounted to 102,261,000 yen, of which exports totalled 51,627,000 yen, and imports 50,634,000 yen, showing an excess of exports involving 993,000 yen. As compared with the same period last year, exports showed a 9.7 per cent. drop.

In contrast to the export trade, however, the home demand for cotton yarn has shown a sharp decrease, as will be evinced by the following table:—

	Total supply of yarn (in bales)	Exported cotton piece goods, calculated as yarn	Home consumption
January	231,671	62,000	169,650
February	232,478	92,771	139,707
March	235,850	104,098	131,729
April	232,599	94,508	138,091
May	225,050	106,587	118,463
June	232,331	119,186	113,145
July	221,431	136,843	84,588
August	219,927	150,918	69,009
September	224,740	145,600	78,474

The following table shows how Japanese spindleage has increased during recent years:—

	Total number of spindles	As compared with the year before	Increased per cent.
1920	3,813,580	325,318	8·53
1921	4,161,126	347,546	8·35
1922	4,517,612	356,486	7·89
1923	4,197,966	−319,646	−7·61
1924	4,870,232	672,266	13·80
1925	5,447,184	576,952	10·59
1926	5,679,852	232,668	4·10
1927	6,116,266	436,414	7·14
1928	6,467,674	350,908	5·53
1929	6,836,516	369,342	5·40
1930	7,214,001	377,485	5·23
1931	7,535,146	321,145	4·26
1932	7,904,908	369,762	4·68

It is stated that the more recent increases are mostly due to the installation of high-draft frames.

According to recent information, the Japanese section of the cotton textile industry in China increased activity from about 60 per cent. of normal to 85 per cent. from mid-November to mid-December, although the Chinese section decreased activity about 5 per cent. The industry in Japan during November was said to have been well maintained, and the continued large demand for piece goods enabled weavers to maintain their high rate of activity. It is further reported that Japanese spinners will observe a curtailment rate of nominal 27.6 per cent. for January-June, 1933, but the estimated actual curtailment will be only 18 per cent. when obsolete machinery is considered.

SPAIN.

An examination of conditions in the textile industry during the year 1932 compels us to distinguish between two periods, during the first of which trade was normal, and no sensible difference from the trend during the preceding year was to be discerned. Both as regards production and sales, this period could be said to be equal to that of the second six months of 1931.

During the second six months of 1932 there commenced a decline in the volume of sales in consequence of the general depression in business in Europe, which had its repercussion on our trade in a very decided manner, especially in those spheres which depend more or less on international exchange.

A further innovation during the second period has been the institution of agreements between masters and operatives by virtue of which wages have been regulated, and working hours have been reduced in most factories. The hours have been maintained, superficially, by special agreements, at eight hours per day.

In consequence of this new regulation of hours it will be understood that in the industrial centres, spinners are more affected than weavers, and production has been reduced by some 15 per cent.—in the cases least affected the reduction is 5 per cent.—with a consequent rise in the cost of production. The general reduction can be estimated at from 8 to 10 per cent.

Exports showed in general a tendency to decline in comparison with those of 1931. This decline amounts approximately to 12 per cent.

(Associacion de Fabricantes de Hilados y Tejidos de Algodon.)

SWITZERLAND.

The number of workers engaged in the Swiss cotton industry at the end of December, 1932, amounted to hardly 70 per cent. in comparison with the same period of 1927. Of this 70 per cent. some 25 per cent. were more or less affected by considerable amounts of short-time working. In the same period of five years the number of active establishments has fallen by about 12 per cent. The majority of the plants at a standstill can be eliminated from the Swiss cotton industry. The orders on hand at the beginning of September prevented the degree of activity from falling further. The prospects for the near future are all the more unfavourable in face of the heavy depreciation of the English pound and the fall in textile wages, which causes Swiss manufactures to be strongly undercut both on the home and overseas markets. The condition of the raw material markets plays its part in crippling the buyer.

The following is the original report in German:—

Die in der schweizerischen Baumwollindustrie beschaftigte Arbeiterzahl betrug Ende Dezember 1932 kaum mehr 70 % im Vergleich zum namlichen Zeitraum des Jahres 1927. Von diesen 70 % waren rund 25 % mehr oder weniger stark von Teilarbeitslosigkeit betroffen. Im namlichen Zeitraum von fünf Jahren sank die Zahl der in Betrieb befindlichen Etablissemente um rund 12 Prozent; die Mehrzahl der stillgelegten Produktionsstatten, dürften für die Baumwollindustrie dauernd ausscheiden. Die zu Anfang September 1932 eingelaufenen Auftrage trugen wesentlich dazu bei, den Beschaftigungsgrad wahrend des IV. Quartals nicht weiter absinken zu lassen. Umso ungünstiger sind dafür die Aussichten für die nächste Zukunft durch die starke Entwertung des englischen Pfundes und Senkung der Textilarbeiterlöhne, die sich in scharfer Unterbietung des Schweizerfabrikates am eigenen und auf fremden Märkten auswirken. Die lustlose Haltung des Rohstoffmarktes tragt überdies das seinige dazu bei, die Nachfrage seitens der Käufer erlahmen zu lassen.

IMPORTS AND EXPORTS FOR THE THREE MONTHS, SEPTEMBER, OCTOBER AND NOVEMBER, 1932.

	Imports		Exports	
	Amount (q)	Value Swiss frs.	Amount (q)	Value Swiss frs.
Yarns	5,384·34	2,336,379	6,135·17	2,640,146
Piece goods	4,790·37	3,834,765	6,206·07	7,602,123
Knitted goods	18·54	103,037	2,281·86	4,518,080
	10,193·25	6,274,181	14,623·10	14,760,349

IMPORT UND EXPORT IN DEN MONATEN SEPT , OKT. UND NOV., 1932

	Import		Export	
	Menge (q)	Wert (fr)	Menge (q)	Wert (fr)
Garne	5,384·34	2,336,379	6,135·17	2,640,146
Gewebe	4,790·37	3,834,765	6,206·07	7,602,123
Stickereien	18·54	103,037	2,281·86	4,518,080
	10,193·25	6,274,181	14,623·10	14,760,349

(*Schweizerischer Spinner, Zwirner und Weber Verein.*)

U.S.A.

Production during November amounted to 249,054,000 yards, or at the rate of 62,263,000 yards weekly, according to the Association of Cotton Textile Merchants of New York, which on December 19 last made public its statistical report of production, billings and sales of carded cotton cloths for November, 1932. The figures cover a period of four weeks. Sales were 204,999,000 yards, or 82.3 per cent. of production. Billings were 215,578,000 yards, or 86.6 per cent. of production. Stocks increased 33,476,000 yards during the month to a total of 200,144,000 yards. Unfilled orders decreased 10,579,000 yards to 336,544,000 yards.

These statistics are compiled from data supplied by 23 groups of manufacturers and selling agents reporting to the Association of Cotton Textile Merchants of New York and the Cotton Textile Institute, Inc. These groups report on more than 300 classifications or constructions of carded cotton cloths and represent the major portion of the production of these fabrics in the United States.

Production was	249,054,000	yards
Sales were	204,999,000	„
Ratio of Sales to Production	82·3	per cent.
Billings were	215,578,000	yards
Ratio of Billings to Production	86·6	per cent.
Stocks on hand November 1 were	166,668,000	yards
Stocks on hand November 30 were	200,144,000	„
Change in Stocks	Increase 20·1	per cent.
Unfilled Orders November 1 were	347,123,000	yards
Unfilled Orders November 30 were	336,544,000	„
Change in Unfilled Orders	Decrease 3·0	per cent

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COTTON GROWING

AUSTRALIA.

About the middle of September rain fell in all the cotton-growing districts, and the long, dry spell, which has prevailed since last April, and was becoming very serious, has been broken to some extent. Prospects for the coming cotton season are now somewhat brighter. The rainfall was, however, very scattered, and in the Central district and the Burnett cotton areas, which comprise about 85 per cent. of the Queensland cotton belt, the precipitation has been insufficient to ensure successful planting. Further good, soaking rains are urgently needed. In the Lockyer, West Moreton and Maranoa cotton districts the fall averaged two to three inches, and cotton planting has had a fine start. In the Callide and Dawson Valley districts, where some growers have already planted delinted seed in the dry soil, there is a danger that the 30 to 50 points of rain which have fallen will germinate the seed, but will not be sufficient to carry the seedlings on, as the subsoil is bone dry.

A later report states that from nearly every section of the Queensland cotton belt come favourable reports of the weather. The earlier part of October was marked with good showers over the district, and further storm rains have been received, so that the prospects for the coming season's cotton crop are excellent. Cotton growers have suffered from two successive bad years, and they are now due for a good season. Nothing would help the cotton industry more, or place growers in a sounder financial position, than a bumper crop. Up to date cotton-seed to plant 73,000 acres has been distributed to the growers by the Cotton Board. This represents a record for the State, the acreage being 10,000 in excess of that at this time last year, and as seed is distributed to growers until early December the cotton crop to be planted will not fall far short of 80,000 acres. (*Textile Journal of Australia.*)

BELGIAN CONGO.

Advices to hand state that it has been definitely decided to abandon the cultivation of cotton in the Southern region of the Belgian Congo, including those districts of the Upper Uele, which are too far from water transport. The crop of the colony will accordingly show a considerable decrease compared with recent years The present yield is estimated at only 9,000 tons, compared with 14,675 tons But as soon as certain narrow gauge lines under construction are completed attempts will be made to grow cotton on a fairly large scale in new districts

CHINA.

Only a fair 1932 cotton crop in China is now expected, as late reports on the crop have been, according to recent reports, less optimistic than those received earlier in the season The United States Bureau of Agricultural Economics has now revised its estimate of the 1932 crop downward 200,000 bales to 2,300,000 bales of 478 lbs While this represents a crop about 35 per cent above last year, it does not differ much from an average taken over a period of years In sections of North China, including Lingpao, where longer staple cotton is produced, the crop is estimated at somewhat below last year and the quality is reported poorer The increase this year over last is chiefly in the Yangtze Valley, where a year ago bad weather conditions and floods greatly reduced the crop

The new crop is reported moving to market slowly on account of the weakening price and uncertainty in foreign markets Chinese mills are said to be operating at nearly normal capacity, while Japanese mills are running on a 60 per cent schedule Japanese yarn is reported selling considerably under Chinese offerings, with the result that stocks of the latter are increasing The demand for cotton goods in the interior of China is reported dull, as a result of the low purchasing power of consumers and the difficulties encountered in financing sales to merchants

This year's cotton crop appears certain to be much better in quality than that of last year In 1931 only the crop in the northern provinces was comparatively good, while that of Kiangsu and Hupeh, the two most important cotton-producing provinces in the Yangtze Valley, was unprecedentedly poor The improved crop this year is chiefly attributable to better weather conditions, especially in the northern provinces In the southern provinces cotton suffered in 1931 from excessive rainfall, but this year similar damage was caused by a dry spell Generally speaking, this year's crop in the southern provinces, in spite of insufficient rain, is expected to be better than that of last year (*I I A* *)

FIJI.

Cotton production in Fiji during 1931-32 is estimated at about 181,000 lbs , of which 105,000 lbs were of the Sea Island variety The entire cotton output was exported to the United Kingdom It is said that the 1932-33 crop will be smaller owing to unfavourable weather, and it is the opinion of some officials that it may not exceed 40,000 lbs (*U S D C* †)

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* *I I A* International Institute of Agriculture
† *U S D C* U S Department of Commerce

FRENCH INDO-CHINA.

In Annam, which furnishes about one-third of the total production of Indo-China, the first picking results have been fair; rather serious attacks of parasites have been reported in one area.

FRENCH WEST AFRICA.

The 1931-32 cotton crop was, according to the latest information received, satisfactory as regards both quantity and quality, and probably better than that of 1930-31. It is also to be noted that the apparent decrease shown by the statistics for 1931 and 1932 does not correspond to the production situation, as the statistics give only the quantities bought by the trade and because, instead of decreasing, actual production has, on the contrary, increased during the last two years.

In Dahomey, cotton growing for 1932-33 appears to be on the decline, due to low prices at planting time, and despite the efforts made by the Government, which has distributed selected seed in the different areas. In the Ivory Coast district the crop seems smaller than last year, due to inadequate rainfall *(I. I. A.)*

HAITI.

Cotton exports during September amounted to 1,016 equivalent bales of 500 lbs., which is 27 per cent. less than was exported in September, 1931, according to official figures. The total exports for the 12 months ending September, 1932, amounted to 28,000 bales, which represents an increase of 51 per cent. over the exports for the 1930-31 season. The total value, however, amounted to 4,062,000 gourdes (1 gourd equals $0.20), compared with 4,254,000 gourdes last year, showing a decline of 5 per cent.

IRAQ.

Cotton production showed a decline during recent years. From the peak of 5,200 bales of 400 lbs. produced in 1928, the output declined to 3,315 bales in 1930 and 965 bales in 1931. The estimate for 1932 places the crop at only about 500 bales.

Iraq produces two varieties of cotton—the short-staple Levantine type and American Upland. The short-staple Levantine is grown for domestic consumption, and represents only a small part of the production, although definite figures on the size of this crop are not available. This cotton is used exclusively for pillows, mattresses and upholstery. There are no spinning mills in the country. The production of this short staple is not sufficient to meet the local requirements, and short-staple cotton is imported from Persia and India. The imports of such cotton for the twelve months ending March 31, 1932, amounted to 347,000 lbs., and for the twelve months ending March, 1931, 319,000 lbs. The American Upland variety is produced mainly for export and is usually shipped to Great Britain. *(U. S. D. C.)*

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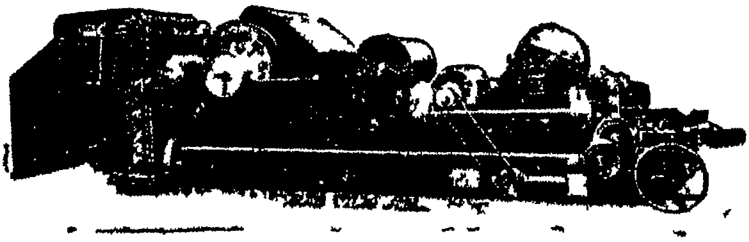

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MANCHUKUO.

According to press reports, Manchukuo has vast arable land suitable for the production of more than 1,200,000 bales of raw cotton annually Japan will become a good buyer of Manchurian cotton if the cotton cultivation is started on a systematic basis The officials of Manchukuo who are interested in cotton planting are now inspecting the prospects of Manchukuo as " a land of cotton " Experts state that the region south of the 42 parallel could easily become a cotton belt The trial planting there proved that 0 245 acre will yield 250 kin of cotton It would not be a difficult matter to grow 295 kin if the conditions were somewhat better

NYASALAND.

H M Eastern African Dependencies' Trade and Information Office has received the following information from Nyasaland for the month of September, 1932 —

The crop is of very good quality, and 90 per cent of that so far brought in has been of No 1 grade The good results obtained are due to the excellent yield of the U4 seed The cotton is grown solely by natives and purchased by the British Cotton Growing Association

It is anticipated that the total crop will approximate 3,000 bales

PERU.

Exports of cotton from Peru during October amounted to 7,640 bales, according to the National Agricultural Society of Peru This compares with 24,500 bales for September and 15,353 for October, 1931 The exports for the three months, August to October, inclusive, aggregated 48,000 bales against 60,000 bales for the corresponding three months of 1931, showing a decrease of 12,000 bales

PUERTO RICO.

Although the yield per acre in 1932 was much higher than in 1931, owing to the almost total absence of insect damage, the production will be considerably below 1931 as a result of the smaller acreage planted, according to official reports

According to a brief notice appearing in the September 16 issue of *El Mundo*, the San Juan Ginnery Company—which acquired all of the production of the Island—decided not to purchase cotton during 1933 and to close its ginnery, the reason for this being the prevailing low prices

Unless other means of financing the growers are obtained, this means that the growers will be unable to plant cotton on the former scale *(U S D C)*

SOVIET RUSSIA.

The cultivation of cotton has been extensively developed in recent years, and on July 1, 1932, an area of 2,348,000 hectares was under cultivation This is a large increase as compared with the pre war time, when the annual average for the five years 1909-13 was about 630,000 hectares In 1924 the area under cotton was 497,000 hectares, and four years later, just before the introduction of the Five Year Plan, it had reached 874,000 hectares The area under cultivation has increased in 1932, as compared with the pre-war period, by 273 per cent, and as compared with 1928, the last year before the introduction of the Plan, by more than 168 per cent The irrigation of very large areas is what has made such an increase possible

The proportion of the total area sown by State, and especially by collective farms, had increased considerably during the last three years While in 1929 the area sown by State and collective farms amounted to only 7 per cent of the whole area cultivated, in 1931 the State farms cultivated 11 and the collective farms 64 per cent of the total, so that only 25 per cent was under private cultivation

The number of tractors in use is growing rapidly, and it is hoped that in the next few years cotton cultivation will be entirely mechanized Even in 1930 about 40 per cent of the area under cotton was worked by machinery The same applies to chemical fertilizers, which were used before the war only on approximately 2 5 per cent of the cotton fields These are now used to a very large extent It is calculated that chemical fertilizers are now used on more than 50 per cent of the cotton fields

In consequence of the introduction of improved methods of cultivation, the output of cotton per hectare, as well as the total output, has increased considerably Advanced technical methods are also being introduced in the ginning of cotton The large number of small badly equipped gins which existed before the war has been replaced by a smaller number of large up-to-date plants, with a combined capacity of more than four times that of the pre war gins All the gins are equipped with the most modern machinery and presses

Following on the improvement in the ginning process and of the improved quality of the seeds used, the percentage of cotton fibre obtained from the raw cotton has increased by more than 3 per cent in the past year

The spinning qualities of Soviet cotton are good, and compare favourably with American cotton As a result, there is a good demand for Russian cotton in European mills Owing to the large domestic requirements, however, only small quantities have been exported so far

(*Monthly Review of the Moscow Narodny Bank, London*)

SPAIN.

The area planted for the 1932 crop amounted to 33,000 acres, according to official figures However, a considerable acreage has been abandoned, and the area remaining for harvest has been estimated at about 20,000 acres On the basis of the August condition it is estimated that the 1932 crop will amount to about 4 000 bales of 478 lbs *(U S D C)*

ST. VINCENT (BRITISH WEST INDIES)

Cotton planting commenced on September 1, after a close season of four months Germination was good, although the weather was somewhat dry The area for the 1932 33 crop will be small, and is estimated at about 550 acres, as against 1,802 in 1931 32 and 3 946, the average for the preceding five year period Percentages 30 and 14 respectively *(I I A)*

SUDAN.

The Director of the Department of Agriculture and Forests for the Sudan issued the following cotton progress report for the month of November, 1932 —

SEASON 1932–33

Variety	Area under crop—Feds	Picked to date Kantars of 315 Rottles	Estimated total yield—Kantars of 315 Rottles
Gezira Sakel Syndicate	175 782	Nil	No useful estimate of yield can be made at this stage of the crop
K C C	19 183	Nil	
Tokar Sakel	45 000	Nil	60 000
Kassala Sakel	17 300	Nil	25 000
Dueim Sakel	425	Nil	1 700
Private Estates Sakel	3 531	Nil	14 584
Total Sakel	261 221	Nil	101 584
Irrigated American	11 260	26 943	36 960
Rain grown American	45 300	2 860	40 792

TANGANYIKA

Cotton picking was progressing during September in the greater part of the country, both quality and quantity being generally satisfactory In some districts of the Central Line Area harvesting was already finished and the bulk of the crop had been marketed *(I I A)*

TOGO (FRENCH MANDATE)

Actual cotton production in 1932 was, as in 1931, very satisfactory, showing an increase on previous years which the statistics do not indicate, as they refer not to production but to the trade situation, falling prices have this year brought about an even larger reduction in purchases in the home market than in 1931 despite the larger supplies of the product *(I I A)*

UGANDA

To the end of September the acreage planted in all provinces was estimated at 1,045,000 acres, showing an increase of 20 6 per cent on the corresponding estimate of last year (867,000 acres), which was only slightly higher than the 1931-32 final estimate (866,000 acres) Reports of localized insect damage were received, and in Teso district the initial stages of blackarm could be found in many areas In general, however, the condition of the crop was normal in all districts *(I I l)*

During October weather conditions were, on the whole, favourable, and the crop developed normally Localized damage from insect pests and disease was reported, but, in general, the damage due to these causes was less than normal The drier conditions which prevailed during October caused some shedding of the earlier buds and bolls, but have been beneficial in retarding the development of any serious outbreaks of blackarm disease At the middle of November there were indications of at least an average yield per acre

WORLD PRODUCTION AND ACREAGE, 1932-33.

The 1932-33 world production is now preliminarily estimated at 23,400,000 bales of 478 lbs by the Bureau of Agricultural Economics, which is 4,100,000 bales, or 14 9 per cent, less than the estimate of the 1931-32 production As compared with the peak production of 1926 27, the present crop is now expected to be 5,000,000 bales, or 17 6 per cent less The estimated world production has not been less than 24,000,000 bales since 1923-24, when the total crop was estimated at 19,700,000 bales As may be seen by the accompanying table, the decrease this year in domestic production is greater than the total decrease, since a return to more normal yields in India and China is expected to result in a total increase in those two important producing countries of about 1,400,000 bales Some increase is expected in Russian production this year also Indicated production in Egypt, Mexico and Brazil account for a decrease of about 553,000 bales Total foreign production, therefore, is estimated at 11,453,000 bales compared with 10,404,000 bales in 1931-32

The estimated world acreage for the 1932-33 season has been placed at 77,100,000 acres, compared with 82,400,000 acres in 1931-32, or a decrease of 6 4 per cent The smaller decrease in acreage than in production is due principally to the decreased yields in the United States, which, according to the November estimate, has brought a 30 1 per cent reduction in production, despite the fact that acreage decreased only 10 per cent Increased yields in India and China tend to offset this to some extent, however

TABLE 1—ACREAGE AND PRODUCTION IN COUNTRIES REPORTING FOR 1932-33, WITH COMPARISONS

Acreage Country	1929–30 1,000 acres	1930–31 1,000 acres	1931–32 1,000 acres	1932–33 1,000 acres	Percentage 1932–33 is of 1931–32 Per cent.
United States	45,793	45,091	40,693	36,611	90·0
*India	20,812	20,506	19,654	18,466	94·0
†China	5,133	5,228	4,800	5,300	110·4
Russia	2,608	3,911	5,346	5,400 to 5,800	101·0 to 108·5
Egypt	1,911	2,162	1,747	1,135	65·0
Uganda	663	740	866	‡1,045	120·7
Anglo-Egyptian Sudan	369	387	336	330	98·2
Mexico	492	390	319	188	58·9
Greece	50	50	46	49	106·5
Bulgaria	14	14	13	30	230·8
Syria and Lebanon	60	60	75	25	33·3
Spain	24	45	14	20	142·9
Total above countries	77,929	78,584	73,909	68,599 to 68,999	
Estimated world total, including China	87,700	86,700	82,400	77,100	93·6
Production	1,000 bales 478 lbs. net	1,000 bales 478 lbs. net	1,000 bales 478 lbs. net	1,000 bales 478 lbs. net	Per cent.
United States	14,828	13,932	17,096	11,947	69·9
India	4,289	4,372	3,401	‡4,200	123·5
†China	2,116	2,250	1,700	2,300	135·3
Russia	1,279	1,589	1,851	1,900 to 2,000	102·6 to 108·0
Egypt	1,768	1,715	1,288	869	67·5
§Brazil	435	341	383	§364	95·0
Uganda	108	158	163	‡250	153·4
Mexico	246	178	210	95	45·2
Bulgaria	4	4	5	11	220·0
Spain	5	7	3	4	133·3
Total above countries	25,078	24,546	26,100	21,940 to 22,040	
Estimated world total, including China	26,500	25,800	27,500	23,400	85·1

Official sources, International Institute of Agriculture and Bureau of Agricultural Economics except as noted.

* Second estimate which includes only area planted up to October 1.

† Estimates of the Chinese Millowners' Association for 1929–30. From 1930–31 to date the estimates of the Chinese Millowners' Association have been adjusted to make them comparable with estimates for previous years.

‡ From an unofficial source.

§ Nine Northern States which during the three years 1929–30 to 1931–32 produced 72 per cent. of the total Brazilian crop.

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Cotton Report, Dec. 1, 1932.

The Crop Reporting Board of the United States Department of Agriculture made the following report on December 8, 1932, from data furnished by crop correspondents, field statisticians, co-operating State Boards of Agriculture and Agricultural colleges. The final total ginnings for the season will depend upon whether the various influences affecting the harvesting of the portion of the crop still in the field will be more or less favourable than usual.

	Acreage for 1932 Crop			Yield per Acre			Production (Ginnings) 500 lb. gross wt. bales*		
State	Left for harvest	Total abandonment after July 1	In cultivation July 1	10-yr. average 1921–1930	1931	1932 (Dec. 1 est.)	1930 Crop†	1931 Crop†	1932 Crop (Dec. 1 est.)
	thous. acres	%	thous. acres	lbs.	lbs.	lbs.	thous. bales	thous. bales	thous. bales
Virginia	74	1·0	75	246	289	181	42	42	28
N. Carolina	1,373	0·8	1,384	242	271	223	775	756	640
S. Carolina	1,842	1·0	1,861	165	245	180	1,001	1,005	695
Georgia . ..	2,985	2·0	3,046	142	194	135	1,593	1,393	845
Florida .. .	91	5·0	96	124	175	79	50	43	15
Missouri ..	390	1·5	396	246	397	350	151	289	285
Tennessee	1,104	1·6	1,122	180	255	195	377	594	450
Alabama	3,159	1·3	3,201	158	200	141	1,473	1,420	930
Mississippi .. .	3,830	1·5	3,888	184	209	144	1,464	1,761	1,150
Louisiana	1,801	0·8	1,816	164	220	162	715	900	610
Texas	13,922	1·9	14,192	126	165	153	4,038	5,320	4,445
Oklahoma	3,123	2·0	3,187	138	178	166	854	1,261	1,080
Arkansas	3,530	1·8	3,595	160	256	171	874	1,907	1,260
N. Mexico	112	1·7	114	‡302	412	325	99	101	76
Arizona	113	0·0	113	308	313	347	§155	§115	§82
California	123	0·5	124	329	440	490	264	177	126
Other	17	0·0	17	‡190	363	286	7	12	10
U.S. Total	37,589	1·7	38,227	151·4	201·2	162·1	13,932	17,096	12,727
Lower Cal.‖	27	0·0	27	‡244	182	230	45	26	13

* Not including production of linters which is usually about 6 per cent. as much as the lint.
† Allowances made for interstate movement of seed cotton for ginning.
‡ Less than a 10-year average.
§ Including 24,000 bales of Pima Egyptian long staple cotton in 1930, 14,000 bales in 1931, and 12,000 bales in 1932.
‖ Not included in California figures nor in United States total.

The 1932 United States cotton crop is estimated at 12,727,000 bales of 500 lbs. gross weight in the December 1 report of the Department of Agriculture. This is 780,000 bales more than the November 1 forecast. The total crop last year was 17,096,000 bales, and in 1930 the crop was 13,932,000 bales.

The average yield of cotton per acre for the United States in 1932 was 162.1 lbs. per acre, compared with 201.2 lbs. last year. The ten-year average for the years 1921-1930 was 151.4 lbs.

The estimated acreage harvested (picked) is 37,589,000 acres, which is 2.7 per cent. more than the acreage for harvest on which the September 1, October 1 and November 1 forecasts were calculated. Current information indicates that about 1.7 per cent. of the planted acreage was abandoned this year, which indicates the cotton acreage in cultivation July 1 to have been 38,227,000 acres.

The increase in prospective production over the November 1 forecast is due partly to better yields per acre being realized in all the major states. Part of the increase is also due to the fact that early reports of acreage planted to cotton were unduly low, necessitating increases in estimated acreage in nearly all states.

Reports indicate that the average weight of running bales this season will be somewhat heavier than usual, although less than last season. This difference between the weight of running bales and 500-lbs. gross-weight bales will mean that total ginnings in running bales will probably be about 300,000 bales less than the calculated 500-lbs. bales.

Boll-Weevil in 1932.

The American Cotton Crop Service, of Madison, Fla., in a recent report, states that the number of adult weevils which entered winter quarters during the fall of 1932 was 95 per cent. greater than the number which went into hibernation during the fall of 1931. On account of the relatively heavy increase in the number of weevils entering winter quarters in the fall of 1931 over that of the preceding year, the number now in hibernation is much greater than at any time since the 1921-22-23 cycle of heavy weevil damage years. Likewise, one of the outstanding features of the weevil hibernation situation is the spread of the pest over new areas of the Cotton Belt. The annual spread westward and northward in the western half of the Belt has been very pronounced. Late reports indicate that a very heavy weevil density entered winter quarters as far north as Mississippi County, Arkansas. In the eastern half of the Belt large numbers of weevils entered winter quarters in practically all areas, including the northern third, which has heretofore been mostly free from the pest.

Weather conditions during the past summer and fall were generally favourable to rapid increase in the weevil population. There are but few dry areas in the infested region where weevil multiplication was retarded by unfavourable climatic conditions Excessive rainfall and relatively low temperature conditions promoted multiplication of the pest in large numbers from the State of Georgia westward, with the exception of a few small areas centring in the vicinity of Western Louisiana and locally in the southern half of Texas.

Average date of killing frost over most sections of the weevil-infested area of the Cotton Belt has enabled large numbers of adult weevils to enter winter quarters under conditions which favour heavy winter survival. When killing frosts occur 30 days or more before low temperatures force the pest into hibernation, a large percentage of the adult weevils in fields starve, as green cotton is their only food. This year, however, temperatures have been sufficiently low to keep the pest inactive since cotton was killed by frost. Likewise, artificial control measures for reduction of the number of weevils present in the fields, such as early fall destruction of green cotton plants, have been mostly ignored by cotton farmers.

Attention has previously been called to the centre of the weevil population as having shifted from the Eastern Belt in 1930 to the Central Belt in 1931. Our 1932 survey of the number of weevils entering winter quarters shows a huge increase in the number in hibernation from the State of Georgia westward, with the heaviest increase in infestation reported from Western Tennessee and the eastern half of Arkansas. The pest also made noteworthy gains in South Carolina, Georgia, Alabama, Mississippi, Texas and Oklahoma, and about held its own in Louisiana, where the western half of the state experienced extremely dry weather conditions. The heavy weevil infestation present in the northern half of the Central Belt is also worthy of note. This area usually experiences very light weevil damage.

WEEVIL HIBERNATION, 1932-33.

For every 100 weevils in hibernation in the winter of 1931, this season there are the following numbers of weevils shown in the table below:—

Texas	160
Oklahoma	176
Arkansas	276
Louisiana	105
Mississippi	169
Tennessee	350
Alabama	283
Georgia	259
South Carolina	138
North Carolina	107

POOR BALING OF AMERICAN COTTON.

There is considerable complaint in Shanghai against the condition in which American cotton arrives, and it is said that the poor covering and ties cause the bales to arrive with the cotton badly exposed, adding to the fire risk. During the last three months three serious fires in American cotton cargoes are said to have taken place, and it is alleged that the losses were greatly enhanced because of poor packing. *(U. S. D. C.)*

Grade and Staple Report.

The following tabulation was issued by the United States Bureau of Agricultural Economics, and shows the quantity of cotton ginned to November 1 by grade and staple.

The tabulation also demonstrates the large quantity of tenderable cotton harvested to November 1, which is 93.5 per cent., as compared with 94.4 per cent. last year.

As regards staples this season compared with the last crop, a larger percentage of $\frac{15}{16}$ in. and $\frac{31}{32}$ in. is available, but a smaller percentage of $\frac{7}{8}$ in. and $\frac{29}{32}$ in. has been produced this season.

Middling white appears to be the grade of cotton most in abundance this season, as 41.2 per cent. of the amount ginned to November 1 is of this grade, as compared with 32.0 per cent. last year. 31.1 per cent. of strict middling white is the next largest grade produced, as compared with 43.9 per cent. last year.

GRADE, STAPLE LENGTH AND TENDERABILITY OF COTTON GINNED IN THE UNITED STATES PRIOR TO NOVEMBER 1, 1932

(Estimated from Data obtained from the Classification of Samples representing American Upland and American-Egyptian Cotton, classed according to Official Cotton Standards of the United States.)

SUMMARY

	1932		1931	
	Bales	Per cent	Bales	Per cent
Total ginnings to November 1, as reported by the Bureau of the Census	9,249,300	100·0	12,129,700	100·0
Total American Upland	9,245,500	99·9	12,124,300	99·9
Total American-Egyptian	3,800	*	5,400	*
Grades (American Upland)				
Extra white, good middling and above	81,600	·9	75,500	·6
„ strict middling	70,200	·8	93,300	·8
„ middling	44,100	·5	19,200	·2
„ strict low middling	61,300	·7	12,100	·1
„ low middling and below	16,200	·2	6,100	*
White, good middling and better	250,100	2·7	913,800	7·5
„ strict middling	2,876,000	31·1	5,325,600	43·9
„ middling	3,811,100	41·2	3,991,000	32·9
„ strict low middling	1,050,100	11·4	939,700	7·8
„ low middling	148,200	1·6	140,600	1·2
„ below low middling	30,200	·3	22,000	·2
Spotted, good middling	91,400	1·0	97,100	·8
„ strict middling	469,800	5·1	325,600	2·7
„ middling	208,600	2·3	119,000	1·0
„ strict low middling	21,000	·2	30,200	·2
„ low middling	3,400	*	3,300	*
Yellow tinged, strict middling and above	3,200	*	3,500	*
„ middling and below	800	*	1,100	*
Light yellow stained	300	*	300	*
Yellow stained	100	*	—	—
Grey, strict middling and above	4,600	*	2,100	*
„ middling	900	*	2,200	*
Blue stained	—	—	—	—
No grade	2,300	*	1,000	*

Less than 0.1 per cent.

AMERICAN-EGYPTIAN COTTON

Grade	Total		Staple-length distribution (inches)				
	Bales	Per cent	Shorter than $1\frac{1}{2}$ Bales	$1\frac{1}{2}$ and $1\frac{17}{32}$ Bales	$1\frac{9}{16}$ and $1\frac{19}{32}$ Bales	$1\frac{5}{8}$ to $1\frac{21}{32}$ Bales	$1\frac{1}{4}$ and longer Bales
All grades ..	3,800	100·0	100	800	1,900	1,000	—
1 and $1\frac{1}{2}$ ..	1,700	45·0	—	200	900	600	—
2 and $2\frac{1}{2}$ ..	1,600	42·0	100	400	800	300	—
3 and $3\frac{1}{2}$ ..	500	13·0	—	200	200	100	—
4 and $4\frac{1}{2}$ ..	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—
Below 5 ..	—	—	—	—	—	—	—

AMERICAN UPLAND

Staple-length distribution

Staple-length inches	1932		1931	
	Bales	Per cent	Bales	Per cent
All lengths	9,245,500	100·0	12,124,300	100·0
Shorter than $\frac{7}{8}$ . . .	548,200	5·9	626,700	5·2
$\frac{7}{8}$ and $\frac{29}{32}$.	3,435,900	37·2	4,917,000	40·5
$\frac{15}{16}$ and $\frac{31}{32}$.	2,694,000	29·1	3,381,000	27·9
1 and $1\frac{1}{32}$ . .	1,351,300	14·6	1,883,000	15·5
$1\frac{1}{16}$ and $1\frac{3}{32}$ . .	649,000	7·0	702,900	5·8
$1\frac{1}{8}$ and $1\frac{5}{32}$.	493,400	5·3	399,300	3·3
$1\frac{3}{16}$ and $1\frac{7}{32}$ .. .	69,300	·8	184,800	1·6
$1\frac{1}{4}$ and longer	4,400	*	29,600	·2

* Less than 0·1 per cent

TENDERABILITY ACCORDING TO SECTION 5,
U S COTTON FUTURES ACT

Tenderability	1932		1931	
	Bales	Per cent.	Bales	Per cent.
Total	9,245,500	100·0	12,124,300	100·0
Inches				
Total tenderable	8,645,900	93·5	11,449,900	94·4
Tenderable $\frac{7}{8}$ to $1\frac{1}{32}$ inclusive ..	7,431,900	80·4	10,134,500	83·6
Tenderable over $1\frac{1}{32}$	1,124,000	13·1	1,315,400	10·8
Total untenderable . .	599,600	6·5	674,400	5·6

SOUTH CAROLINA EXPERIMENTS.

According to recent experiments undertaken by the United States Department of Agriculture, cotton which has remained open in the field for 18 days or more can no longer, on an average, be classed as white. During the course of experiments recently carried out by a South Carolina plantation for the purpose of determining how long cotton may be safely left out in the field, newly opened bolls were marked. Cotton was picked from some bolls each day over a long period, and tested for change of colour. During the first two weeks, samples picked were graded strict good, or good middling, white or spotted. The last sample graded in the white grades was picked on the 18th day after the experiment commenced From that time onward, the samples were graded progressively through good middling spotted, good middling grey, strict middling spotted, strict middling blue, strict low and strict low middling spotted, and finally became so low in colour that they could not be graded at all by the official colour standards

Crop Allotment Plan.

A few weeks ago what has become known as the Crop Allotment Plan was brought before members of the Government, and the latest information is that the House Committee on Agriculture has approved the Bill and ordered it to be reported to the House of Representatives

In its present form the Bill applies to wheat, cotton, tobacco and hogs, and seeks to raise the prices of these commodities by requiring processors to pay an adjustment charge sufficient to bring the price up to the pre war level on that portion of the crops which are consumed domestically (the term processors in the case of cotton meaning cotton spinners)

These charges which are to be paid into a general fund, are only to be refunded to those growers who have agreed with the Secretary of Agriculture to reduce their acreage 20 per cent

Adjustment certificates will be issued to the cotton planter either when the cotton is ginned or the unginned cotton sold

The Bill states that the Secretary of Agriculture shall issue two weeks prior to the commencement of each marketing year an estimate "as nearly as practicable and proclaim the percentage of the total domestic production of the commodity during the then current calendar year that will be marketed and needed for domestic consumption"

The amount to be paid to farmers observing the 20 per cent reduction in acreage has not yet been decided upon, but in this connection the Bill states that a "fair exchange allowance" will be proclaimed by the Secretary of Agriculture immediately after the approval of the Act It furthermore states that the "allowance for any commodity shall be the difference between the price received for the commodity at local markets and the fair exchange value" and "shall bear to the price of all commodities bought by producers during the last three months period for which index numbers are available the same ratio as the price of the commodity paid producers at local markets during the base period bore to prices for all commodities bought by producers during such base period" (commencing September, 1909, and terminating August, 1914)

A clause is inserted in the draft Bill which precludes the farmer from planting on the 20 per cent of his cotton land not put to cotton "*any commodity of which, in the opinion of the Secretary, there is normally produced or is likely to be produced an exportable surplus*"

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Collection of Adjustment Charges There will be levied and collected on the first processor" of the commodity an adjustment tax The Bill later excludes the ginner from this category, and obviously refers to the cotton spinner in U S A This tax will be at the same rate per unit of the commodity as the fair exchange allowance then in effect In order to protect the cotton spinner from disadvantages in competition a similar tax is to be levied upon silk and rayon, but there will be no tax on rayon produced from cotton which has already paid the tax The proceeds of all taxes collected, less 2$\frac{1}{2}$ per cent for the payment of administration expenses, will be paid back to the farmer

Commodities for Export Upon the giving of a satisfactory bond for the observance of the provisions of the Act requiring the payment of charges any person shall be entitled without payment of the same, to process for export such commodities or hold the same in bond

Low valued Products If the Secretary of the Treasury and the Secretary of Agriculture jointly find that any class of products of any commodity is of such low value compared with the quantity of the commodity used for their manufacture that the imposition of the adjustment charge would prevent in whole or in large part the use of the commodity in the manufacture of such products, and thereby substantially reduce consumption and increase the surplus of the commodity, then the Secretary of the Treasury may abate or refund the adjustment charge with respect to such commodity

Imports During any period in which the tax is in force a compensatory import tax will be levied on cotton of a staple of less than 1$\frac{1}{8}$-in staple and on jute of 5 cents a pound A further duty of 5 cents per pound is proposed on all cotton goods made from cotton of a staple less than 1$\frac{1}{8}$ ins Such duty shall be in addition to any other existing duty

(*Some American views on the Crop Allotment Plan are published under Miscellaneous*)

U.S. Cotton Exchanges—Tariffs and War Debts.

The following are the terms of a resolution recently adopted by the Houston Cotton Exchange dealing with the tariffs and war debts situation Similar resolutions have been adopted by the cotton exchanges in Dallas, New York and New Orleans

"The membership of the Houston Cotton Exchange is composed predominantly of men of Southern agricultural blood and environment Most of them are tied by blood relationship to Southern farmers, all of them are tied to Southern farmers as neighbours and by the fact that their livelihoods depend directly upon the survival and prosperity of Southern agriculture

"It is therefore fitting that the Houston Cotton Exchange should express itself in a matter which threatens the very existence of Southern agriculture

"Fifty-five per cent of the average American cotton crop must be sold abroad The cotton farmer can be paid for this 55 per cent of his crop only by what the foreign buyer can pay for it

"The foreign buyer can pay only in three ways—(*a*) in goods, (*b*) by borrowing in America, or (*c*) in gold

"The foreign countries are prevented from paying in most kinds of goods that they produce by the fact that selfish minorities, interested in the production of those kinds of goods in this country, have procured the erection of tariff walls so high that they make imports of these goods impossible

"Payments by borrowing have become impossible, because the lenders of money have realized that there is no chance of being repaid under such a regime

"Payments in gold are impossible, because already about half the world's stock of gold is in this country and the remainder is an insufficient protection for the stability of foreign currencies under the circumstances now prevailing

"On top of this, the foreign Governments owe our Government about $11,000,000,000, which is the rough equivalent of all the gold in the world, or of twice the stock of gold outside this country, and the annual payments against these debts have taken away from the foreign buyers' means of payment, and finally appear to have left both the private buyers and the Governments abroad unable to find further means with which to pay our farmers or our Government

"The foreign Governments have notified our Government that they will be unable to go on paying against the inter-Governmental debts at the present scale, and have asked for a conference to determine what shall be done

The foreign buyers of cotton and wheat are so many that they cannot speak as a unit, but 6-cent cotton and 40-cent wheat is their notification that, so long as international, commercial and financial relations remain as they are, they cannot pay our cotton farmers and wheat farmers a living price

"The members of this exchange give solemn warning to the Southern farmers and to their representatives at Washington that, unless this critical situation is promptly faced and solved, the growing of cotton and wheat for export has perished as a means of decent livelihood in this country

"As an immediate first step toward the solution of this situation, we demand of our representatives, and urge every farmer to demand, that our Government consent to confer at once with the foreign debtor Governments, with a view to finding a rearrangement of debts that can in fact be carried out without destruction of the foreign buying power on which our farmers' survival depends

"As a fundamental solution, along with the rearrangement of debts, we demand, and urge every farmer to demand, that our tariff wall be cut down, so that foreigners can pay their debts and pay for our goods by sending us their goods, and so that our farmers, who must sell in foreign markets in competition with the cheapest foreign production, may be restored their inalienable right to buy what they need in any market, wherever it is cheapest

"The members of this exchange beseech their Southern neighbours in other walks of life, all of whom depend directly and indirectly on the cotton farmer, and their Northern neighbours, who depend on the wheat farmer, to join in this fight—for their own self-preservation"

The resolution adopted by the New York Cotton Exchange reads as follows —

"The depression of the cotton-growing industry of this country is a matter of vital concern to the entire nation Fully 10 million people out of our total population of 125,000,000 are directly dependent on the growth of cotton, its merchandising and manufacture The average value of the domestic cotton crops for the past five years has been approximately one billion dollars

"Over half of our annual harvest of cotton is normally exported Cotton is the largest single item in our list of exports, and Europe is our most important foreign customer The fact that Europe's takings in the past two years have fallen far below normal is, in our opinion, largely attributable to serious economic conditions occasioned in no small degree by the burden of war debts

"The general public has been confused rather than enlightened by contradictory writings and statements by economists and political leaders as to the ability of various nations to pay for our products The public is entitled to a concise statement of facts formulated on the basis of careful study by competent authorities in whom they may have implicit confidence

"It is our judgment that the whole question of war debts is now essentially an economic problem, rather than a political one, and should be considered only as such We are convinced that the thought which should guide all future debt negotiations is that a prosperous Europe contributes to a prosperous America It is essential to endeavour to keep the world markets intact and capable of buying and paying for our export surpluses

"We are opposed to any drastic action in respect of any nation whereby that nation would be restricted in its trade with the United States We believe that our economic welfare rests chiefly on a normal course of commerce A fresh study of this question, in the light of existing conditions, is not only warranted but essential"

COLONEL H. G. HESTER.

Col H G Hester, the well-known Secretary and Statistician of the New Orleans Cotton Exchange for 61 years, resigned last December He is succeeded by Henry Plauche, who has for many years held the position of Assistant Secretary

Col Hester was named Secretary Emeritus immediately upon his resignation, and the exchange will continue to benefit by his advice and long experience of the cotton trade

RAW COTTON EXPORTS.

The following table gives the exports of raw cotton from the United States since August 1 to December 3, 1932 (inclusive of linters):—

	From Aug 1 to Dec 3, 1932	Corresponding dates last year
Great Britain	547,403	451,577
Belgium	77,593	66,274
Denmark	11,230	11,144
France	419,701	130,832
Germany	809,817	635,348
Holland	54,156	58,215
Italy	281,265	219,105
Norway	3,018	2,350
Poland	46,468	7,550
Portugal	22,348	16,750
Spain	117,771	103,113
Sweden	26,722	21,808
Other Continent	2,247	1,761
Japan	649,422	714,693
China	91,159	481,042
India	11,001	41,551
Canada	51,035	76,791
Mexico, etc	10,586	2,883
Linters	62,000	32,000
Total	3,232,942	3,043,687

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MECHANICAL COTTON PICKING DEVELOPMENT.

During the last four years an intensive study and a series of experiments have been made at the State Agricultural Experiment Station, Lubbock, Texas, with a view to developing a type of cotton that will lend itself to mechanical harvesting, it was recently stated by Mr. D. L. Jones, superintendent of the station.

In the beginning of this work a machine to strip cotton was invented by Mr. H. P. Smith, chief of agricultural engineering at the station, as a means of obtaining information as to the type of cotton best suited to mechanical harvesting. The crossing of different breeds of cotton to bring about a type more adaptable to the ultimate purpose in mind was begun in 1928.

One type developed here showed on October 25 some 87 per cent. of the bolls open, or more than that of any other variety. It also did not have as much cotton on the ground. The bolls began opening on September 10. It also had from counts made of bolls per plant a higher production.

The experiment station expects to distribute a small quantity of this special seed for the next crop in this district.

Another satisfactory cross was made between Durango cotton and Wacona cotton. During the past season six other varieties were experimented with, but the results were not satisfactory in all cases.

Sledding of cotton is regarded as not practical except in the high plains region of North-west Texas. This method of harvesting was first practised there in 1923. In 1928 the slot type sled harvested an average of 73.4 per cent. of the cotton from twelve varieties tested. In 1930, with a smooth running revolving rubber stripping roll, developed by the station, the average was 88.6 per cent., and with improvements the average for 1931 was 91.1 per cent. of the total yield from three varieties tested. The 1928 type collected 42.8 per cent. of trash while the Texas station cotton harvester in 1931 collected 34.7 per cent. Cleaning of the mechanically harvested cotton in 1930 and 1931 removed 32.1 per cent. waste including invisible loss. Burrs, stems, dirt and leaf trash were taken out, leaving 67.9 per cent. seed cotton.

PINK BOLL-WORM DAMAGE IN TEXAS.

Following upon a recent inspection of the cotton fields in the Big Bend area of West Texas by a special committee of legislators, farmers and representatives of the Federal and State Departments of Agriculture, Mr. Engelhard, a member of the Texas Legislature, issued a report from which we extract the following excerpts:—

"One of the greatest dangers confronting Texas if this pest is not cleaned up in the territory where it now exists and should spread to the main Cotton Belt, is the placing of a Federal quarantine against cotton and all cotton products produced in

Texas. Should such infestation be scattered into several areas the pressure from the other cotton growing States would be so great that the National Government would be compelled to establish such quarantine. This would result in heavy cost to Texas cotton producers, even if the loss from the insect itself were not serious.

"If the pink boll-worm becomes prevalent in the main Cotton Belt of Texas I am certain that it will practically destroy the cotton industry in the State, because the damage from the pink boll worm, added to other damage now suffered, will make it impossible to raise cotton profitably.

"I am so greatly alarmed over it that I feel that immediate steps should be taken to eradicate the worm in the infested territory to save other parts of Texas. At the present time the quarantine regulations are holding the pink boll worm bottled up in the Rio Grande Valley from Presidio County up to the New Mexico line. The infestation in the El Paso section is not so serious at present, but if the experience is the same as in the lower counties where it has increased each year, it will not be more than a few years before cotton-growing will become unprofitable in the upper valley.

"I do not know at this time the best means of eradicating the pest, but I am very sure that it must be destroyed to protect the rest of Texas, for if the present quarantine ever proves ineffective and the worm appears in Central Texas, I doubt if it could be controlled."

Mr Engelhard states that he went into the worst infested fields and found damage running from 25 to 90 per cent., with a probable fair average of 50 to 75 per cent. Most fields were more than half ruined by the ravages of the worm. The worm appeared in the Big Bend in 1923, since which time it has increased steadily, even after complete non-cotton zones in some parts of the area. One stalk examined on the trip had about 300 bolls in all stages of development. One hundred half-matured bolls were picked and examined by the group making the trip, and 99 were found to be infested. Examination of mature and open bolls showed further damage to locks with the ripe seeds harbouring live worms.

SPREAD OF THE PINK BOLL-WORM IN U.S.A.

The Department of Agriculture announced recently that in consequence of specimens of the pink boll worm having been found in a cotton field in Columbia County, Florida, and in gin trash at High Springs and Lake City, Fla., the Secretary of Agriculture has ordered a hearing to consider whether quarantine restrictions will be needed to prevent the spread of the insect.

The pink boll-worm is widely distributed in other countries, and is a principal source of damage to cotton in Africa and Asia, but with the exception of the present limited outbreak it is not known to occur in the main Cotton Belt of the United States. It is distinct from the cotton boll-wevel.

Pink boll-worm outbreaks which occurred in Eastern Texas and South-western Louisiana about 15 years ago were completely eradicated by the State and the Federal Governments from 1917 to 1922, and no specimens have been found since in that region.

Another similar outbreak in the extreme western end of the main Cotton Belt of West-Central Texas, found in 1927, has been stamped out. The insect is established in Mexico, and occurs in certain irrigated regions of the United States along the Rio Grande and Pecos rivers in Texas and New Mexico, and at a point in Arizona.

It is believed that the insect constitutes a menace to cotton production in the United States, owing to the fact that although the boll-weevil is especially injurious in wet seasons, the pink boll-worm is equally adapted to dry seasons, and it might therefore prove injurious in the years in which boll-weevil injury is slight.

The principal loss due to the boll-weevil comes from the shedding of the squares before the bolls are formed. The principal damage by the pink boll-worm occurs later in the season to seed and to bolls produced from squares which have escaped the boll-weevil. Thus a combination of the two pests working together would be especially threatening.

Several months ago the pink boll-worm was reported in Florida, but until recently this outbreak appeared to be confined to the wild cotton growing in the southern part of the State on the Keys and on the east and west coasts.

It was also found in one experimental planting near Miami, but cultivated cotton is not grown commercially in that part of the State. The discovery of a few specimens in cultivated cotton in Northern Florida makes it necessary for the Department to consider restrictions to prevent the spread of the pest.

Heat treatment of cotton-seed, and either the compression or fumigation, or both, of cotton-lint, are the principal methods of preventing the spread of the pest from the regions of Texas, New Mexico and Arizona now infested.

NEW VARIETY OF LONG STAPLE COTTON.

In his annual report to Secretary of Agriculture Arthur M. Hyde, Dr. W. A. Taylor, chief of the Bureau of Plant Industry, reveals the development of a new variety of cotton, 1½-in. staple.

The new variety, Dr. Taylor said, can be best produced in the irrigated lands of the South-west, but tests are being made to introduce it to localities where Pima cotton, from which the new type was produced, is not now being grown.

"Under normal conditions," Dr. Taylor's report said, "the United States imports from Egypt many thousand bales of Sakel cotton, the fibre of which rarely exceeds 1½ ins. in length. It is believed that the area in the South-west devoted to cotton of Egyptian type could be much increased if a variety similar to Sakel in length and fineness of fibre were available.

"Earlier experiments in Arizona with Sakel cotton have not given promising results. It has proved to be less productive, later maturing, and smaller bolled than Pima. In the hope of combining the desirable features of the two varieties, crosses were made between Pima and Sakel, and from one of these crosses a new variety of considerable promise has been developed It will not take the place of Pima since the lint is only 1½ ins long, but it may replace acceptably some of the cotton now imported from Egypt''

Dr Taylor said that progress was also reported on the breeding experiments with Sea-Island cotton in South Carolina and Florida

ACREAGE PROSPECTS FOR 1933.

The American Cotton Crop Service, in writing of the next crop's acreage prospects, state the following, under date January 4, 1933 —

Cotton acreage outlook for 1933, based on the low price farmers received for the 1932 crop together with the general depression in business, would ordinarily indicate substantial reduction However, on account of cheap labour, the "drift" of industrial workers back to the farm and relative abundance of cheap feed and food supplies, not much change is indicated Competitive crops of cotton, such as corn, hay, peanuts, truck, poultry and live stock, are selling at relatively lower prices, and, in interior markets, cotton is about the only commodity produced on the farm for which farmers secure ready cash payment The average cotton grower cannot pay taxes and interest on mortgages with funds derived from the sale of peanuts now selling at approximately $12 50 per ton, syrup at 20 cents per gallon, hay at from $5 to $10 per ton, and hogs at 2½ cents per pound Because of poor marketing conditions in the small towns of the Cotton Belt, competitive crops are difficult to dispose of for the average farmer, and our information points to cotton as the main cash crop for 1933

The discussions of plans and laws to regulate the amount of acreage planted to cotton are now making their annual appearance The average cotton grower has become accustomed to this political form of "helping the farmer' and takes little or no interest in the theory of boosting prices by legislative action The latest plan, or so called Allotment Plan, has some good features, but we believe has too many flaws to become workable in the Cotton Belt Should the price of cotton advance above the 7 cent level by, or before, planting time a moderate increase in cotton acreage would probably occur The following trend in cotton acreage was indicated in reply to a recent questionnaire to crop reporters concerning 1933 prospects —

Alabama Not much change in cotton acreage indicated Fertilizer will be reduced again Reduction in the use of fertilizer, and poor equipment plus gloomy prospects, points to low yield per acre for 1933 Many small farmers will be unable to plant unless Government loans are available

Arkansas An abundance of cheap labour and good supplies of feed and food stored on farms will promote the usual cotton acreage The use of fertilizer will be materially reduced

Georgia Heavy weevil damage in 1932 and low prices for all 1932 crops will probably cause cotton acreage to be moderately reduced unless the Government finances small farmers Too early to determine with accuracy cotton acreage trend

Louisiana Fertilizer will be reduced in the hill sections, but not much change in cotton acreage because of low prices of competitive crops

Mississippi Probably small cotton acreage reduction Fertilizer will also be reduced Cotton will be planted as the main cash crop, because of low prices of competitive crops

Oklahoma The usual cotton acreage will be planted, and prospects are for slight increase in districts where drought prevented sowing fall grain crops

North Carolina Bad financial condition of farmers and short crop in 1932 points to reduction in fertilizer and moderate cotton acreage reduction

South Carolina Drought in some sections reduced feed crop yields which, together with bad financial condition of farmers, may cause moderate cotton acreage reduction

Tennessee Probably slight decrease in cotton acreage Fertilizer will also be reduced Competitive crops of cotton offer little encouragement, and farmers will attempt to produce a very cheap crop

Texas Plentiful supply of cheap labour and an abundance of cheap feed and food stored on farms points to increase in cotton acreage in many districts Some reports from the North western area indicate as much as 1 per cent increase in cotton acreage for 1933 Low price of competitive crops of cotton and drought in grain districts during the past fall will also be factors in increasing cotton acreage

Summarizing preliminary data on the 1933 cotton acreage prospect, not much change from the acreage planted last year is indicated Many correspondents state that it is too early to determine acreage trend while others state a slight increase in acreage to cotton is expected However reduction in the use of fertilizer and prospective weevil activity, together with the low *morale* of farmers point to a probable low yield per acre under average weather conditions

CONSUMPTION OF AMERICAN COTTON.
ESTIMATE FOR 1932-3.

Mr F W Tattersall estimates the consumption of American cotton for the current season at 13,000,000 bales, against 12,319,000 bales, according to the returns of the International Federation for 1931-32

The details of the consumption figures for last season, with his estimate for 1932-33, are given in the following table —

	International Federation Consumption 1931 32	Estimated Consumption 1932 33
	(bales in 1 000 s)	
United States	4 747	4 950
England	1 312	1 450
Rest of Europe	3 341	3 650
Asia	2 636	2 700
Minor countries	250	250
	12 319	13 000

If the American crop for 1932-33 is taken as 12,750,000 bales, with a carry-over from last year of 13,000,000 bales, the total supplies for the twelve months should be about 25,750,000 bales With a consumption during the present season of 13,000,000 bales, there is a probability of a carry-over at the end of next July of 12,750,000 bales, or 250,000 bales less than at the end of July, 1932

CROP REPORTS.

Messrs Weil Bros , Montgomery, Ala , in their semi monthly crop letter, dated January 3, state as follows —

Rain was had in the entire Cotton Belt during practically the whole month of December The precipitation was quite heavy in some sections In consequence thereof there has been no preparation of the land that is to say ditching and terracing which usually takes place to some extent during December A certain amount of lethargy obtains with the Southern cotton farmers over the entire Belt especially in the Atlantic and Gulf States The past year has not been a prosperous year—to the contrary it has been a losing proposition The crop 1932 33 is estimated at 12,500,000 to 12,750,000 bales and the previous crop was some 4 000,000 bales more whereas the price per pound averaged about the same as the crop of 1931 32 Imagine what loss it is to the South, not only to the farmers but to the commercial interests, no matter what their particular line or business is No wonder the Southern Governors' Conference at Memphis recommended a compulsory cut in cotton acreage They presumed that the less acreage the less production and consequently higher the price The independent condition of the farmer in having plenty of food and feed stuff is the one bright spot in the Southern farming communities because it is a well known fact that advancing merchants and bankers will lend little or no assistance for making a cotton crop

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Constantin J. Choremi, President, Alexandria General Produce Association.
Hussein Enan Bey, Egyptian Section.
B. Damiani, Secretary of Egyptian Section.

England:

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(Deceased 18th January, 1933)
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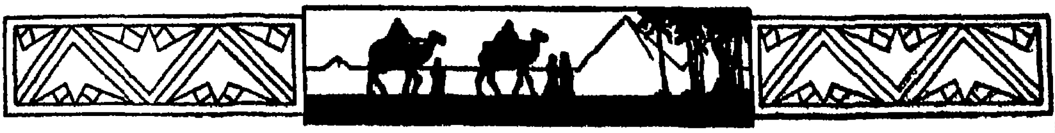

EGYPTIAN COTTON

GOVERNMENT CROP ESTIMATE.

The following is the crop estimate published by the Egyptian Government on December 5 last:—

	Cantars	Yield per Feddan Cantars
Cotton of long staple (Sakel, Maarad, Sakha 4, Gizeh 7), of which Sakel 1,081,935 cantars	1,542,387	3·13
Cotton of medium staple (Nahda, Pilion, Gizeh 3, Fouadi)	354,034	3·85
Cotton of short staple (Ashmouni, Zagora and others)	2,301,050	4·53
Cantars	4,197,471	3·84

COMPARISON OF EGYPTIAN GOVERNMENT ESTIMATE (IN CANTARS)

	1932–33 Second Estimate	1932–33 First Estimate	1931–32 Final Estimate	1930–31 Final Estimate	1920–30 Final Estimate
Sakellaridis	1,081,935	1,080,032	1,315,959	2,070,830	2,695,389
Other Varieties .	3,115,536	3,114,511	4,896,451	5,944,570	5,634,065
Total	4,197,471	4,194,543	6,212,410	8,015,400	8,329,454
Crop	—	—	6,563,139	7,892,697	8,485,089

THE POSSIBILITIES OF GIZEH 7.

During the last two years attention has been frequently drawn to the possibilities of the above-named variety, which is almost equal in strength to the very best Sakel.

Spinners have of late been attracted to this cotton, no doubt on account of relatively low prices, and this has given rise to a brisk demand for Gizeh 7 in the Egyptian market.

Much of this season's crop, amounting to some 20,000 bales, has already been sold. It is expected, however, that a larger quantity will be produced next year.

CROP REPORTS.

The Commission de la Bourse de Minet-el-Bassal, in their monthly crop report, dated Alexandria, December 5, 1932, state as follows:—

Lower Egypt: The rain, which fell at the beginning of the month, caused some damage to the small quantity of cotton remaining on trees in North Delta, but, generally, temperature during November was favourable for opening bolls of last picking; actually, there is practically no cotton in fields. For season Sakellaridis yielded less per feddan than 1931; on the contrary in other varieties, an increase of from 10 per cent. to 20 per cent., according to district, is observed. Ginning yield has not undergone any change during month.

Upper Egypt and Fayoum: Picking was finished at the end of October. Have nothing to add to our information of last month.

Taking into account all information, estimate total crop about 4,450,000 cantars. Last year's crop was 6,563,139 cantars, and the previous year, 7,892,697 cantars.

EGYPTIAN GOVERNMENT GINNING REPORT—COTTON GINNED TO END OF NOVEMBER (in Cantars)

	This year	Last month	Last year	Previous year
Sakellaridis	498,929	207,144	586,511	788,592
Other Varieties	2,032,950	1,232,697	2,711,579	2,844,378
Scarto	56,784	29,217	82,506	79,856
Total	2,588,663	1,469,058	3,380,596	3,709,826

EGYPTIAN COTTON BOTANIST FOR U.S.S.R.

Mr. C. H. Brown, B.Sc., formerly cotton botanist to the Egyptian Ministry of Agriculture, has recently taken up a similar post with the Russian Soviet Authorities.

It is presumed that the authorities in Russia are anxious to increase their production of Egyptian varieties of cotton in Central Asia. The production of these varieties in Turkestan in 1931 is estimated at 25,000 bales of 500 lbs., compared with 4,000 bales produced in 1930.

EGYPTIAN COTTON CONSUMED IN U.S.A.

(Equivalent 500 lb. bales)

Month	1924–25	1925–26	1926–27	1927–28	1928–29	1929–30	1930–31	1931–32	1932–33
August	11,715	16,213	17,629	22,469	18,759	20,285	7,073	5,607	6,230
September ..	13,523	17,966	22,884	19,795	16,297	17,484	7,915	7,096	6,461
October	13,971	17,529	20,812	19,413	20,057	20,107	9,420	6,508	7,858
November ..	10,127	12,558	16,883	20,507	17,858	18,263	8,980	6,600	--
December	16,479	16,195	16,876	18,864	18,003	17,076	10,134	6,500	—
January	18,980	18,408	17,297	20,199	22,325	19,646	7,782	6,611	—
February	17,698	19,149	17,042	20,435	19,516	17,036	8,377	6,665	--
March	17,720	21,778	21,773	17,112	20,515	15,826	8,771	8,263	--
April	18,502	18,198	19,527	16,406	20,159	18,156	9,763	6,127	—
May	17,088	16,866	22,140	14,943	20,481	15,947	8,630	6,009	—
June	17,876	14,676	26,045	13,951	18,046	13,278	8,898	6,020	--
July	17,805	14,577	21,354	13,430	20,343	11,701	7,740	6,085	--
Total ..	191,544	204,113	239,768	217,584	232,392	205,765	104,095	79,401	--

MARKET REPORTS.

Messrs Reinhart & Co, Alexandria, write under date January 13, 1933, as follows —

Our futures market has been quiet and inactive throughout the week under review without any decided tendency either way

The only factor worth speaking of is the narrowing of the difference between January delivery and the more distant trading months, caused by firmness of the spot market for medium grades which is excluding the possibility of larger tenders The second January tenders amounted to 750 cantars only January delivery closed to day at 24 points below March and 99 points below November, as against 37 and 117 points respectively a week ago Unless a new factor makes its appearance on our market it is to be foreseen that these differences will narrow still further and it is not unlikely that January delivery will be quoted at a premium on March within a few days

Government Cotton According to the local newspapers the Government are studying the question of resuming the sale of their cotton on our local market starting with Sakellaridis No decision has however been taken so far At this occasion it may be of interest to recall the details of the unsold portion of the Government stock as per January 1, 1933, viz —

	Cantars
Sakellaridis	697 435
Ashmouni	434 097
Various	29 477
	1 161 009

Spot Market The spot market has been moderately active, daily transactions averaging about 2 700 bales The demand for medium grade Sakellaridis has been general, and premiums have stiffened further during the week under review Much business in these qualities had to be refused by exporters on account of the scarcity of such cotton

The interest for medium grades Uppers has diminished somewhat, most of the exporters having withdrawn their offers in these qualities owing to the small stocks which remain for sale

Ginning Report The Ministry of Agriculture has published to day the following report giving figures for the period from September 1 to December 31 1932

	Cantars 1932	Cantars 1931
Sakellaridis	766 472	823 775
Other long staple varieties	366 199	341 675
Medium staple varieties	255 205	197 788
Uppers and Zagora	1 930 943	2 933 214
Scarto	77 170	111 842
Totals	3 395 989	4 408 294

The Alexandria Commercial Co, Alexandria, write under date January 13, 1933, as follows —

Uppers We have had a series of rather quiet sessions but the tone has remained steady, the reason being the absence of serious pressure on prices, due both to the fact that fixing operations against spot cotton for Interior account this week have again been insignificant, and to the attitude of local operators who are reluctant to commit themselves to the bear side, and prefer to adopt a waiting policy for the moment

The demand from the trade, while not being as broad as could be desired, has at the same time continued fairly satisfactory; the demand has emanated from more or less all the usual sources, and as the bulk has been for prompt shipment there is every reason to suppose that spinners are only moderately well supplied with cotton. A regular demand may consequently be looked for during the rest of the season, naturally varying with the requirements of the industry of the moment. As has been often repeated, these requirements in their turn will be based on the degree of confidence reposed by consumers in existing world-wide economic and political conditions.

The spot market continues to show a steady tone, due principally to the lack of medium and inferior qualities of Ashmouni, and to a more active interest on the part of buyers in Zagora and Pilion.

Prospects are for quiet but at the same time fairly steady markets.

The Ashmouni/American straddle (February/March) this week stands at 207 cent. points, against 212 cent points last week, and 43 cent points at this time last year.

Sakel. In Sakel there is absolutely nothing special to report. Transactions have been few, hedge sales against spot cotton being easily absorbed by trade purchase in cover of new business concluded with spinners, and by some opening of straddle positions consisting of purchases of Sakel against sales of Ashmouni.

On the spot market the differences of the various grades of Sakel have been transferred from basis January to basis March without reduction, which means a profit of $\$\frac{1}{4}$ to $\$\frac{3}{8}$ to holders of these cottons.

As in the case of Uppers, we look for rather inactive markets, but a fairly steady tone.

Spot. The total turnover for the five working days of the week under review amounts to about 13,400 bales, of which we estimate 6,000 bales Ashmouni and Zagora, 5,000 bales Sakellaridis and 2,400 bales other varieties.

Ashmouni and Zagora. The market for these varieties has been rather quieter, but a better demand has been noticed for the good grades. Spot differences do not show much change from last week.

Sakellaridis. Cotton of this variety below fully good fair is becoming so scarce that very high premiums have now to be paid to secure even small quantities. Good and good to fully good have met with a better demand. Spot differences for fully good fair/good and above remain unchanged.

Other Varieties. Again this week all grades of Giza 7 have been sought after, and better premiums than last week have been paid. A few lots of good to fully good Maarad have changed hands at about last week's differences. Nahda and Pilion continue to be neglected. Fouadi fully good fair/good up to good to fully good has been well favoured.

The Egyptian Produce Trading Co., Alexandria, Egypt, communicate the following, under the date of December 31, 1932:—

The year has drawn to its close without any change in the uncertain outlook which was the principal feature of nearly all our recent reports, and although the sentiment of official goodwill seems to be increasing on all hands, it is still too early to affirm that the end of our troubles is in view, and that better times are close at hand. What one can, however, be sure of is that the improvement, when it comes, will proceed slowly, and that its gradual progress will be the best guarantee of its definite reality.

The world's Stock Exchanges, which are the surest barometers of the situation, do not offer us any clearly marked tendencies. Trade as a whole is too closely connected with the political outlook to permit of its being considered without reference to the latter, which obviously is still immersed in obscurity. International questions of the greatest importance, such as debts and disarmament, are still being "studied," but France's refusal to settle the December payment will compel the United States to approach the whole problem from a new angle. Tariff barriers, exchange restrictions, low commodity prices, and the heavy load of agricultural indebtedness, the badly-defined internal situation in Germany, the complex Manchurian problem and numerous others, all call for delicate handling.

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Actual Cotton and Futures

EGYPTIAN, AMERICAN, PERUVIAN, SUDAN, BRAZIL AND ARGENTINA COTTONS

Future Orders executed in LIVERPOOL, NEW YORK, NEW ORLEANS, CHICAGO, ALEXANDRIA, BOMBAY and HAVRE

Much is expected of the forthcoming World Conference, though the frequent repetition of such "meetings of the nations" has rather decreased their moral value, so that one cannot yet base any sound hopes on this latest convocation.

The sterling rate improved considerably during the period under review, moving from 3.19⅛ on November 30 to 3.32¼ to-day.

Interest in cotton has suffered its usual seasonal decline but textile activity seems to be improving on all hands. Lancashire was in the market, and the improvement of the Sakel contract at Liverpool as compared with ours has directed increased attention to this growth on our market. Business with the Continent was rather quiet. Japan placed a number of important orders at the beginning of the month, whilst America continues taking her supplies from spot Sakel (Egyptian Government consignments) lying at Boston.

The final Bureau report issued on December 9 indicated a crop of 12,727,000 bales, exceeding general expectations by half a million bales. This provoked a temporary decline, but the recovery was rapid, producing the impression that the report gave the signal for releasing a certain volume of buying-power. On December 5 the Egyptian Government and the Minet-el-Bassal Commission published their estimates of the Egyptian crop, the figures being 4,197,471 cantars and 4,450,000 cantars respectively. In general, opinion here favours a crop exceeding even the latter estimate.

The Sakel situation as at December 15 can be résuméd as follows :—

		Crs.
Stock at August 31, 1932		1,330,000
Surplus of receipts over exports as at December 15		200,000
		1,530,000
	Crs.	
Sakel crop (Govt. estimate)	1,080,000	
Less receipts to date	630,000	
		450,000
Total supplies of Sakel in Egypt as at December 15 (including 700,000 cantars Government holding)		1,980,000

It should be noted that we consider the Sakel crop should be estimated at 1,250,000 cantars instead of 1,080,000 cantars, as given above.

Last season, during the period from December 18 to the close of the campaign, Sakel exports totalled 1,505,000 cantars, though this included some 350,000 cantars consigned by the Government, and of which only a portion was sold. On the other hand, one must bear in mind that news of the Sudan crop is unfavourable, indicating a production of from 500,000 to 600,000 cantars against some 900,000 cantars last year. Then again, it is by no means certain that our Government will, during the course of the present season, liquidate all its holdings.

Carrying premia in Sakel futures have widened; we feel that, unless there is a radical change in the situation, they will be maintained throughout the season.

The Uppers situation as at December 15 is as under :—

		Crs.
Stock at August 31, 1932 (after deduction of Crs. 300,000 sold to local spinners)		1,315,000
Surplus of receipts over exports as at December 15		510,000
		1,825,000
	Crs.	
Uppers (Ashmouni/Zagora) Govt. crop estimate ..	2,300,000	
Receipts to date	1,605,000	
		695,000
Total supplies of Uppers in Egypt as at December 15 (including 445,000 cantars Government holding)		2,520,000

It should be noted that we consider the Uppers crop should be estimated at 2,600,000 cantars instead of 2,300,000 cantars, as indicated above.

Last season, from December 16 to the end of the campaign, Uppers exports totalled 2,710,000 cantars, but these did *not* include Government consignments It is clear that the widening of the disparity with American, which at the close yesterday stood at 207 gold points, will lead to a decline in the offtake of Uppers, but, all the same, the position of this variety is very strong We believe that discounts in Uppers futures will be maintained

Receipts since the beginning of September amount to 3,104,281 cantars, and exports to 2,132,981 cantars, against 4,241,758 cantars and 2,668,969 cantars respectively during the same period last season Stocks at Minet-el-Bassal now stand at 4,254,403 cantars (inclusive of 1,468 449 cantars Government holdings) against 5,641,397 cantars at this time a year ago

We extract the following from the December, 1932, report of *The Missr Cotton Company* —

The fact that the markets have been able to withstand the onslaughts of finance and politics and of the two recent Washington crop estimates, that they have not only remained steady but have shown a tendency to rise, is proof to us that prices have reached the lowest level possible, the worst has been discounted in the present rates, and although we cannot foresee a considerable rise in the near future, yet we do believe that if a change does come it can only be towards a gradual higher level and not towards a lower one

The state of trade is also on the improve and likely to inspire confidence The U S Bureau of the Census has issued a statement to the effect that the American industry has worked with 97 per cent capacity in October, on a single-shift basis, as compared with 84 9 per cent for October, 1931 Stocks throughout the industry are low, due to extensive short time working in every country of the world, even the retail shops are empty, and thus we believe that once prices start their upward turn there will be a good demand all round

The prospects of the cotton industry are everywhere brighter, with the exception of the uncertainty of whether planters in America will next season make a real effort to curtail production or not The Egyptian farmers did their share last year The leaders in America ought to realize that only a reasonable reduction of the acreage will maintain the equilibrium between production and consumption, which after many hard struggles, is at last in sight The time must come when the world will again pay for agricultural commodities at the price which it costs to produce them, and when this point has arrived, not before, the cotton industry, and almost every other industry, will feel the benefits, with the result of a return to normal output of manufactured goods, for the agricultural classes all over the world are the mainstay of the cotton industry It is not over-production which is at fault, but under consumption, made imperative through the stress of years

The Missr Cotton Co, Alexandria, in their January report state that the Egyptian Government had intended to commence selling its stock shortly after the New Year, but at the request of the Agricultural Syndicate the commencement of the sales has been postponed until February It is proposed to sell the cotton then in the open market, probably by auction, in such small quantities that the sales will not depress the price

It must be borne in mind that the Government stocks have shrunk to unimportant figures There are left unsold —

58,000 bales Ashmouni and Zagora
90,000 bales Sakel
4,000 bales Pilion

The export figures are beginning to lag very much behind last year's

The shortage so far is 94,000 bales, and arises principally from the smaller takings of England, which is 80,000 bales behind last year Owing to the disparity in price between Ashmouni and American, we have this season no chance of making up this deficit in other countries, as was the case during the last few seasons

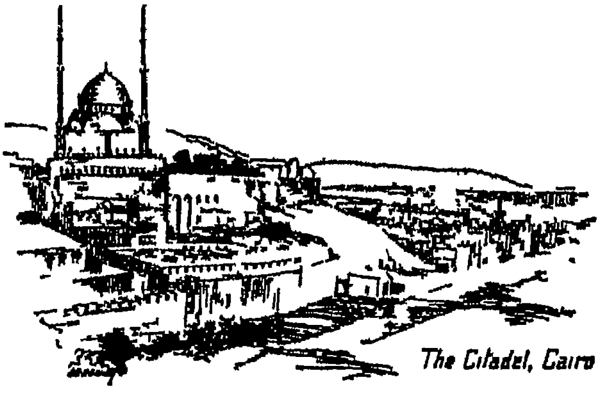
There is a tendency to increase the estimate of the crop, 4 million cantars are looked upon as likely, yet whatever figure it is going to be, it is sure to be less than the actual consumption

We refer to what we wrote in one of our recent reports It is very probable that the farmers will plant as much cotton as they possibly can One hears of a probable acreage of 2 million feddans Gizeh 7 which we have constantly recommended, is sure to make great headway, there has been during the last few weeks a rush in the demand for sowing seed and one authority puts the likely acreage of this variety at 100,000 feddans, though this seems somewhat exaggerated Such an acreage would supply 70,000 to 80,000 bales During the past season only 20,000 bales were produced Spinners may be convinced that there will be an ample supply of this new variety in the coming season, and the prospects of its continued increase in future years are favourable It is an exceptionally high yielding variety, though the ginning outturn is low

ERRATA.

On page 87 of the last issue of THE INTERNATIONAL COTTON BULLETIN (October, 1932, No 41) there is a slight error in the tabulation

In the costs from Alexandria to port of landing the sub-total 35 35 for Lower Egypt should read 45 45, and for Upper Egypt instead of 33 55 should read 43 65, with the consequent alteration to the total charges per cantar of 88 85 and 89 15 respectively



The Citadel, Cairo

East Indian Cotton.

Crop Forecasts (All-India).

Third Official Cotton Forecast, 1932-33.

This forecast is based upon reports furnished by the under-mentioned provinces and states, which practically comprise the entire cotton area of India. It deals with both early and late varieties of cotton and relates generally to conditions up to the beginning of December, 1932.

The total area sown amounts to 20,779,000 acres, as against 22,358,000 acres at this date last year, or a decrease of 7 per cent. The total estimated yield is 4,235,000 bales of 400 lbs. each, as compared with 4,093,000 bales (revised) at the corresponding date last year, or an increase of 3 per cent.

Weather conditions have not been quite favourable, but the present condition of the crop is, on the whole, reported to be fair.

The detailed figures for the provinces and states are shown below (the figures for the previous years are given in the appended statement):—

Provinces and States	Area Acres (thousands)	Outturn Bales of 400 lbs. each (thousands)	Yield per acre lbs.
Bombay*	5,137	1,190	93
Central Provinces and Berar	4,269	823	77
Punjab*	2,252	616	109
Madras*	1,728	361	84
United Provinces*	527	170	129
Burma	309	62	80
Bengal*	76	21	111
Bihar and Orissa	65	12	74
Assam	37	15	162
Ajmer-Merwara	33	11	133
North-West Frontier Province	16	3	75
Delhi	2	1	185
Hyderabad	3,504	521	59
Central India	1,052	138	52

* Including Indian States.

CROP FORECASTS (ALL INDIA)—*Continued.*

Provinces and States	Area Acres (thousands)	Outturn Bales of 400 lbs. each (thousands)	Yield per acre lbs.
Baroda	722	124	69
Gwalior	563	86	61
Rajputana	407	69	68
Mysore	80	10	50
Total	20,779	4,233	81

On the basis of these figures, the average outturn per acre of the present crop for all-India works out at 81 lbs., as against 73 lbs. at this time last year.

A statement showing the present estimates of area and yield according to the recognized trade descriptions of cotton, as compared with those of the preceding year, is given below.

Descriptions of Cotton	Acres (thousands)		Bales of 400 lbs. each (thousands)	
	1932–33	1931–32	1932–33	1931–32
Oomras —				
Khandesh	1,059	1,137	226	172
Central India	1,615	1,768	224	232
Barsi and Nagar	2,407	2,491	358	360
Hyderabad-Gaorani	883	862	130	115
Berar	2,973	3,160	565	525
Central Provinces	1,296	1,466	258	230
Total	10,233	10,884	1,761	1,634
Dholleras*	1,549	1,996	383	489
Bengal-Sind: —				
United Provinces	527	784	170	217
Rajputana	440	468	80	†81
Sind-Punjab	1,086	1,990	483	402
Others	72	74	14	16
Total	2,725	3,316	747	†716
American: —				
Punjab	771	756	—	160
Sind	86	49	29	12
Total	857	805	233	172
Broach	1,234	1,204	294	281
Coompta-Dharwars	1,376	1,254	255	268
Westerns and Northerns	1,392	1,726	190	244
Cocanadas	165	176	29	33
Tinnevellies	366	275	95	76
Salems	163	148	28	27
Cambodias	267	200	118	86
Comillas, Burmas and other sorts	452	374	100	67
Grand Total	20,779	22,358	4,233	†4,093

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* The comparative decrease in both area and yield is chiefly due to incomplete information received from the Western India States Agency of Bombay where 'Dholleras' variety is only grown. The Agency States report an area of 895,000 acres with a yield of 233,000 bales in this forecast, as compared with 1,410,000 acres with a yield of 367,000 bales in the corresponding forecast of last year and 1,512,000 acres with a yield of 438,000 bales in the final (April) forecast of last year.

Adulteration of Indian Cotton.

In a recently published leaflet, the Indian Central Cotton Committee draws attention to the ill effects of adulterating the better types of Indian cottons The statement points out that most mills follow the practice of mixing two or more varieties of cotton, for the manufacture of yarn, with the double object of reducing the initial cost of production and inequalities in grade, quality and colour which are frequently found to exist as between one bale and another or between different parts of the same bale In order to obtain the best possible results due regard must be paid, at the time of preparing a mixing, to the degree of cleanliness, colour and quality of its components and the physical and chemical properties of their fibres, as the harmful effects of a mistake or miscalculation at this preliminary stage are likely to persist throughout the subsequent processes of cleaning, spinning, bleaching, dyeing, etc , and give unsatisfactory results in the end But the calculations of even an expert mixer are bound to be upset if he is compelled to work with cottons which have been adulterated without his knowledge Unfortunately, this happens occasionally because the short-staple varieties being generally more prolific and possessing a higher ginning outturn are surreptitiously mixed with the long staple growths with a view to making undeserved profits A little reflection will show that this is a short-sighted policy, as repeated failure on the part of the spinner to obtain the anticipated results with adulterated cottons must antagonize the market against their districts of growth and depress the price of even its genuine varieties Besides, when the seeds get hopelessly mixed the good quality cottons may suffer seriously in quality as a result of cross-fertilization in the fields Spinning tests on specially prepared mixings of long-staple and short-staple Indian cottons have been made from time to time at the Technological Laboratory with a view to ascertaining the reduction in the spinning performance of the former as a result of their adulteration with known percentages of the latter In view of the great importance of the results of these tests to the growers, as well as spinners of Indian cottons, the Indian Central Cotton Committee decided to give them wide publicity by publishing a separate leaflet on the subject with a view to combating the evil of adulteration

The composition of the different series of mixings used in these tests is shown below —

1st Series—

P A 4F with 10 per cent 20 per cent , 30 per cent , 40 per cent , and 50 per cent N T 16/S

2nd Series—

P A 289F with 10 per cent , 20 per cent , 30 per cent , 40 per cent , and 50 per cent N T 16/28

N B —The three above-mentioned cottons belonged to the 1929-30 season N T 16/28 is a selection from Mollisoni which is an improved type of Punjab *deshi*

3rd Series—

P A 289F with 10 per cent, 20 per cent, 30 per cent, 40 per cent, 50 per cent, 60 per cent, 70 per cent, 80 per cent, and 90 per cent P A 4F

4th Series—

Karunganni with 16 per cent, 22 per cent, 26 per cent, 28 per cent, and 31 per cent, Pulichai

N B —These cottons belonged to the 1930 31 season Spinning tests were also made on 100 per cent pure P A 4I, N T 16/28 and P A 289F of their respective seasons

The following are the principal conclusions derived from these experiments —

In every case, adulteration impairs the quality of yarn, even when the proportion of the short-staple cotton is relatively small The number of yarn breakages in the ring frame mounts up, yarns become progressively less even, and in one case (4F and N T Mollisoni) are found to be considerably neppier than those spun from either of the two pure cottons

The diminution in yarn strength, in come cases, is phenomenal Karunganni, which in the pure unadulterated state will yield a good 20's warp, is found suitable for no more than 12's standard warp counts, when mixed with 25 to 30 per cent of the short-staple Pulichai cotton It is further found that if the fibre-properties of the short staple variety differ considerably from those of the long-staple variety, the diminution in yarn strength is both regular and continuous, so that, within a wide range of percentage composition, the spinning performance is very nearly proportional to the amount of the inferior growth present in the mixing Such, for instance, is the case with P A 289F and N T (Mollisoni) The former has a long and fine staple, while the latter is a relatively coarse and short-stapled variety It follows that, as the percentage of N T (Mollisoni) in the mixtures is gradually increased by equal amounts at a time, the highest standard warp counts for which the mixtures are found suitable decrease in a regular manner —a decrease of 3 units in the latter being associated with an increase of 10 per cent in the proportion of the former On the other hand, when the fibre properties of the inferior variety do not differ so radically from those of the superior variety, the spinning performance of the mixtures declines at first rapidly and afterwards slowly, as the proportion of the short-staple cotton is gradually increased The difference in the behaviour of these two series of mixtures has been explained quantitatively in terms of the modification of their fibre-properties It is realized that in actual practice it is neither customary nor advisable to attempt to mix widely dissimilar cottons, nevertheless it will be found useful to bear the above two conclusions in mind in order to form a correct estimate of the spinning performance of a mixture of known composition

The observation made above that diminution in the strength of yarns spun from a mixture of two dissimilar cottons is directly proportional to the amount of the short-staple component gives us a useful working rule which may be applied either to infer the spinning performance of a mixture of known composition or to estimate the composition of a given mixture

INDIAN COTTON ENQUIRY COMMITTEE.

Under Article 8 of the Agreement concluded at Ottawa between His Majesty's Government and the Government of India, His Majesty's Government in the United Kingdom undertook to co-operate in any practicable scheme that would bring about a greater use of Indian cotton in the United Kingdom

In connection with the above undertaking, the following representatives have been nominated by trade organizations in Lancashire, and have been invited by His Majesty's Government to form a Committee to promote the greater use of Indian cotton in this country Sir Richard H Jackson (Chairman), Mr T Ashurst, Mr G W Bennett, Mr H S Butterworth, Mr R Houghton, and Mr James Littlewood

The secretarial work has been undertaken by the British Cotton Growing Association

Lancashire and Indian Cotton.

As a direct result of the Ottawa Conference, the British Government recently formed a committee to discover means by which the use of Indian cotton in England might be increased Two prominent members of this committee, viz , Mr H S Butterworth, of the Ash Spinning Company, Shaw, and Mr James Littlewood, a director of the Lancashire Cotton Corporation, both of whom possess many years' experience in the spinning of Indian cotton, were recently interviewed by the *Manchester Guardian Commercial* on the subject of the quality, uses and possibilities of Indian cotton in Lancashire We publish below, as likely to be of interest to growers of Indian cotton, a resume of these interviews

Mr Littlewood stated that, in his opinion, as soon as India produced the right cotton, there would be a big demand for it in Lancashire He further stated that the chief trouble with Indian cotton was that the bulk of the supply was of too short a staple for the Lancashire spinner The average length of Indian cotton was about [illegible] in to ¾ in The shortest American cotton used by him was about ⅞ in to 1 in In his opinion, what was required from India was a larger supply of staple approximating to that of American 1 in to 1⅛ in , Liverpool style India certainly grew some long-stapled cotton, but not in sufficient quantity Moreover, the Indian spinners use most of it themselves This tendency had been much accentuated since India put an import duty on

American cotton. He thought that if India wanted Lancashire to buy more of her cotton then she ought to produce a larger quantity of good cotton.

Mr Littlewood further stated that a great deal of Indian cotton was used in Lancashire now, and had been used for a number of years. Some of it was spun by itself, but the bulk was blended with American, but even this season when Japan had increased her consumption of American, she was using far more Indian cotton than Lancashire.

He gave it as his opinion that the reason for the wide difference in consumption was due to the different type of trade done in Lancashire, who had built up her own industry on cotton of 1⅛ in staple. That was the staple required for the old India and China trade, the trade which had now dwindled to a mere shadow of its former self.

He further stated that there were some difficulties in the way of Lancashire using short staple Indian cotton, but they were not insuperable. Many Lancashire mills could not handle short-staple cotton, because they were not equipped with suitable machinery to deal with it. Adaptation in plant was certainly needed to deal with Indian cotton. They would have to have improved opening machinery to deal with the harder pressed Indian bales and smaller rollers to deal with shorter staple. There were any number of mills in Lancashire which might be potential users of Indian cotton, but they had not the capital to buy the new machinery.

In his opinion, other defects of Indian cotton were that it was not so well ginned as American, that there was too much mixing of staples and that there were wider variations in colour than in American. He thought it all boiled down to the fact that India did not take sufficient care of her cotton. India must improve her crop, both in quantity and quality. There was no apparent reason why India should not grow more staple cotton of a kind suitable for Lancashire.

Mr H S Butterworth thought that there was undoubtedly

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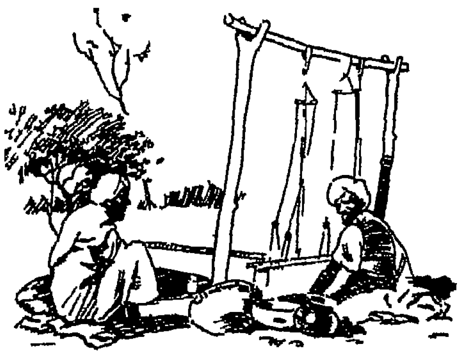
much cotton grown in India which if it were available for Lancashire spinners, could be made into cloth of a quality equal to many and superior to some of those now produced in Lancashire He thought that much of the cloth which had been substituted for Lancashire goods in the Indian market was of an inferior quality Unfortunately the world was not in a position to pay quality prices and it seemed to him the duty of spinners manufacturers, finishers and merchants in Lancashire to co operate in marketing a range of cloths such as were produced by Eastern makers They in Lancashire had been told repeatedly that buyers would not accept from Lancashire goods lower than their usual standard He did not believe that to be the case, provided they made the price right

If, by revising her ideas about qualities and turning her machinery over to the production of lower quality goods, Lancashire could find more employment for her spindles and looms, then in his opinion such an alteration in the character of her trade would be a good thing In that case he thought than an increased use of short staple Indian cotton might prove an advantage to Lancashire

Another spinner thought that, price for price, Indian cotton was dearer to use than American, because, owing to the risks of breakages, spindles had to be run more slowly for Indian, with the result that there was less production from the machines, quite apart from the fact that Indian cotton usually yielded a lower quality yarn The brownish tint of Indian cotton was not always a disadvantage In some cases he had even found its colour an asset when mixing it with American, for the resulting yarn had been very bright in colour



International Cotton Congress, Prague

JUNE 8, 9 and 10.

The next International Cotton Congress will be held in Prague during Whit-week, from June 8 to 10, 1933, and below will be found some information which will be found useful to intending delegates

COMMITTEE MEETINGS

A meeting of the Joint Egyptian Cotton Committee will take place on Tuesday morning, June 6 at 10 0 a m A meeting of the International Cotton Committee will also take place on Wednesday morning, June 7, at 10 0 a m In the evening of June 7, a banquet will be offered to the members of the International Cotton Committee and the Joint Egyptian Cotton Committee by the Minister of Commerce at the Ministry of Commerce

Provisional Programme

OF THE

16th International Cotton Congress, to be held at PRAGUE, June 8 to 10, 1933.

CONGRESS PROCEEDINGS.

THURSDAY, JUNE 8, 1933

10 0 a m	Inaugural Reception
2 30 p m	First Session of the Congress Egyptian Sectional Meeting No 1 American Sectional Meeting No 2 Indian Sectional Meeting No 3
5-0 p m	Reception and Garden Party offered to delegates and ladies
8 0 p m	Banquet offered to delegates and ladies by the Master Cotton Spinners' and Manufacturers' Associations of Czecho-Slovakia

FRIDAY, JUNE 9, 1933

9 30 a m	Second Session of Congress General Subjects
2 30 p m	Technical Subjects
5 0 p m	Reception by the Lord Mayor at the Hotel de Ville, Tea will be offered to the delegates and ladies
7 0 p m	Committee Meetings

SATURDAY, JUNE 10, 1933

10 0 a m	Third Session of Congress (Carlsbad) Resolutions

The following special subjects are suggested for discussion —

The Effects of Futures Trading upon the Cotton and the Cotton Yarn Market

The Protection of Spinners from Financial Losses due to Failure of Cotton Exporters

The Development of the More Looms per Weaver System

The Effect of Unemployment Benefit upon European Industry

Other subjects which have been suggested for discussion under the various sections are as follows —

Moisture in American Cotton
New Machinery and New Processes
Experience of High Drafts
Effects of Dyes on Different Varieties of Cotton
Limitation of Credits
Microscopical Work in the Cotton Mills
Trade Restrictions, etc

Those intending to submit papers on any of the above subjects should forward them to the Head Office, 238 Royal Exchange, Manchester, no later than April 15 1933, in order that translations of the same may be made and circulated to all the delegates

Any member wishing to submit or desiring to write a paper on another subject should communicate with the Head Office at an early opportunity

It is anticipated by the Czecho Slovakian Associations that a large number of delegates will be attending the Congress There will be no limit to the number of delegates, but it must be clearly understood that no guarantee can be given that delegates whose names are sent in after May 8, 1933, will be accepted

The meetings of the Congress will take place in the Palais der Baumwollspinner of the Wirtschaftsverband Csl Baumwoll spinnereien (Hospodarsky Svaz Csl. Pradelen Bavlny), Revolucni 1, Prague, where a general information bureau will be established for the benefit of delegates.

Ladies are invited to attend the inaugural reception and also all social functions.

Endeavours are being made to arrange that the final meeting of the Congress on Saturday, June 10, shall take place in Carlsbad at 10-0 a.m. Delegates and the ladies will leave Prague during the course of Friday evening, June 9, probably by motor-bus. The Congress will terminate in Carlsbad on Saturday morning before lunch.

A special luggage label will be issued to delegates which will facilitate their passage through the Customs at the different frontiers.

There are a number of high-class hotels in Prague and in Carlsbad, but special arrangements for hotel accomodation are not yet complete. This information will be circulated to the various national associations in due course.

Attention is drawn to the following statutes of the International Cotton Federation relating to the holding of International Cotton Congresses:—

The associations in each country shall appoint delegates to attend the Congresses. No restriction shall be placed on the number of delegates any association may send, but the voting power shall be as follows:—

One vote for each million spindles or part thereof.

One vote for each 40,000 looms or part thereof, but not more than twenty votes to be given by any one country.

Voting shall be by the showing of hands, but shall be by ballot if desired by 25 per cent. of those present empowered to vote.

Each association shall, before the end of March, appoint its delegates for the following Congress, and shall at once intimate to the secretary the names, postal addresses and cable addresses of such delegates

Fourteen days' notice shall, if possible, be given to the secretary at headquarters of any change in the appointment of delegates.

The expenses of delegates shall be paid by the association they represent, or by the delegates themselves.

If a delegate be unable to be present he may be replaced by another representative of his association. This representative, however, must present satisfactory credentials to the Committee.

Any association wishing to bring a subject before the annual Congress, or propose the alteration of a rule, shall forward its resolution to the secretary at headquarters before the end of March.

Delegates may speak in English, French or German, but it is desirable that they use the English language, in order to obviate, as far as possible, the necessity of translation.

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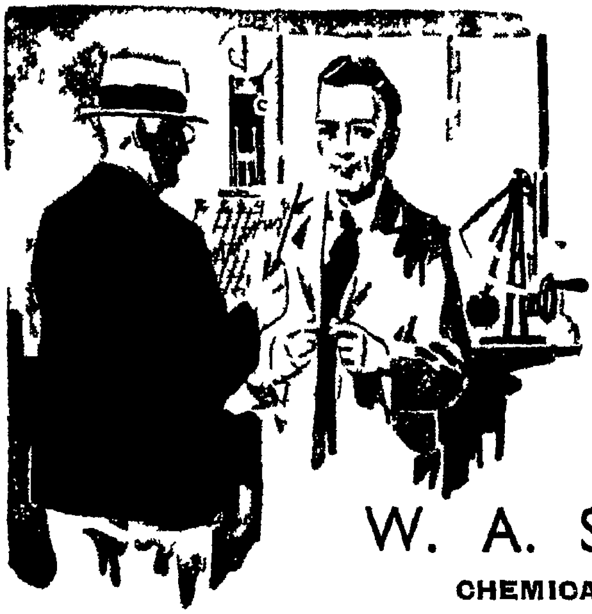

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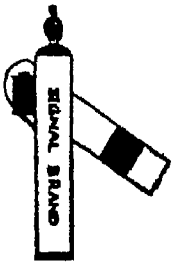

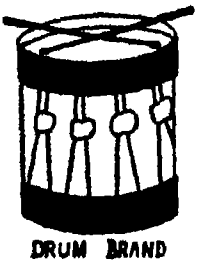

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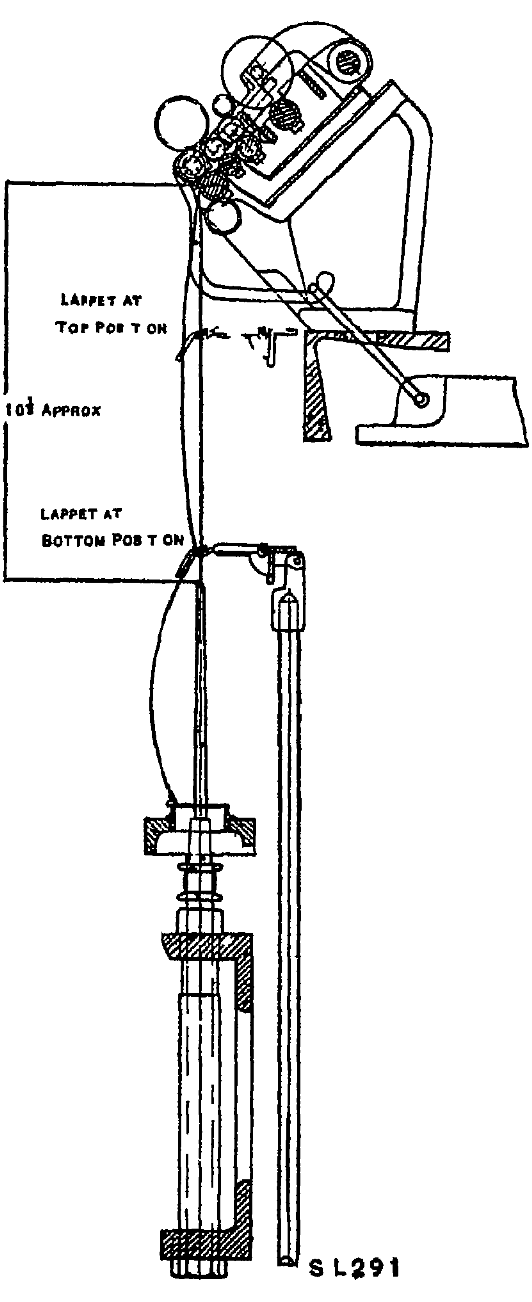
Mule Yarn on Ring Frame.



MESSRS PLATT BROS & CO LTD, textile machinists, of Oldham, announced last November the production of a new vertical spindle weft yarn ring spinning frame where the resulting product has all the characteristics and appearance of cotton yarn spun on the mule The makers state that they have only permitted the new spinning system on the ring frame to be made public after the new machines had been tried out under practical working conditions

Theoretically, the winding tension on a constant speed ring spinning frame varies inversely with the winding on diameter of the cop or bobbin It becomes clear, therefore, that when winding at the nose of the cop, or just where the yarn is actually in contact with the bare spindle, a relatively high twisted yarn has, up to the invention of the new machine, been essential to prevent yarn breakage when winding at the critical diameter The new invention appears to provide the solution in a soft twisted yarn

The new machine is the outcome of such extensive experiments, conducted throughout with the specific objects of supplying to the industry a ring spinning frame capable of producing a soft, full yarn with the

RELATIONSHIP BETWEEN THE LEA TEST AND THE SINGLE THREAD TEST.

(*Technological Bulletin, Series B, No 15, Indian Central Cotton Committee 8 annas*)

We publish below a summary of a pamphlet recently issued by the Indian Central Cotton Committee —

In *The Textile Weekly* of April 8, 1932, Gregson has suggested a method of predicting the lea breaking strength of a yarn from an analysis of the individual results of its single thread test As his conclusions were based upon the behaviour of only one yarn, it was not possible for him to infer either the general applicability or the limitations of his method The present paper describes the results of application of Gregson's method, with the above mentioned two objects to 144 carded and combed yarns, spun from standard Indian cottons into counts ranging from 6's to 80 s The following conclusions are derived —

(1) The lea strength, as obtained by Gregson's method, is generally greater than the observed lea strength when the lea ratio

$$\frac{\text{lea strength (lb)} \times 100}{160 \times \text{mean single thread strength (lb)}}$$

is less than 70, and less than the observed lea strength when the lea ratio is greater than 70

(2) The percentage differences between the calculated and the observed lea strengths are comparatively small only if the lea ratio lies between 67 and 77 In almost all other cases the percentage differences are quite large, i e , Gregson's method breaks down completely

(3) Even when the lea ratio lies between 67 and 77 the agreement between the calculated and the observed lea strength is not always very good—a discrepancy of 5 per cent is quite common, of 10 per cent not uncommon

(4) There is apparently no relation between the counts and "lea ratio," so that unless a lea test is actually performed it is not possible to foretell the "lea ratio" of a yarn

(5) In view of the above conclusions, the only practical application of Gregson's method is that, when both tests are performed, it can serve as a check upon the lea test results in those cases in which the lea ratio lies between 67 and 77 It cannot be used to predict the lea strength in any and every case

(6) Even in the case of similar yarns, spun from duplicate lots of the same cotton, the percentage differences between the calculated and the observed lea strength may sometimes assume large values This is probably due to the different degrees of irregularities in the structure of yarn which are revealed more minutely by the single thread test than by the lea test

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Ring and Traveller Designs and Speeds.

By DONALD EADIE (Eadie Bros. & Co. Ltd.).

MUCH of the information which follows has been gathered by machinists and ringmakers in other countries with whom we come into very close contact in order to secure the necessary working of certain patents. The information which they send us is usually very detailed, and we are left with the impression that tests of all kinds are more willingly undertaken and more thoroughly made there than here—at any rate so far as our trade is concerned.

It is a remarkable thing how many of the technical articles on ring spinning agree that the traveller is the most important part of the machine, and it is, therefore disappointing to find how little interest is taken in any new style that we want to try out.

SPINNING RINGS AND TRAVELLERS.

In Fig. 1 (*a*) you will find illustrations of the common types of spinning rings together with their appropriate travellers. The No. 2 flange ring, with a flange width of 0.163 in. and the 1½-flange and 2-flange travellers take care of practically all European medium and fine count spinning. There are a few installations of rings with a flange width round about 0.157 in., but practically none of No. 1 flange (0.125).

In the United States it is quite otherwise, and I am indebted to the Whitinsville Spinning Ring Company, of Massachusetts, for the following information:—

> A generation ago No. 1 flange-rings were commonly used on counts 40's and finer; ten years ago on 30's and finer, with a tendency to-day on 20's and finer. Americans have little question as to the wisdom of this division of flanges.

This means that in spinning rings 1½ ins. and less in diameter there are far more 1-flange rings than 2-flange in use. This means that the range of counts which, in England, is covered with one type of ring and two types of traveller, in America is covered with two types of ring and three types of traveller. I believe that these 1-flange rings do not last quite as long as the heavier 2-flange type, and this is probably due principally to the smaller bearing surfaces and possibly in part to the lighter ring not hardening so well.

This increasing tendency to use narrower flanges which is noticeable in America has come about because of the increased spindle speeds of the last few years The object is to get more stock into the body of the traveller so as to withstand the harder usage This is on the same principle as the substitution here of 1½-flange travellers for 2-flange, but it can be carried a step further because the ring flanges are smaller The limiting factors in this direction are the dirt and fly which collect on too small a traveller and break down the end and the possibility that too stiff and heavy a traveller will break off the ring flanges For instance, until Indian mills started using better mixings of cotton the 1½-in flange traveller could not be used there at all

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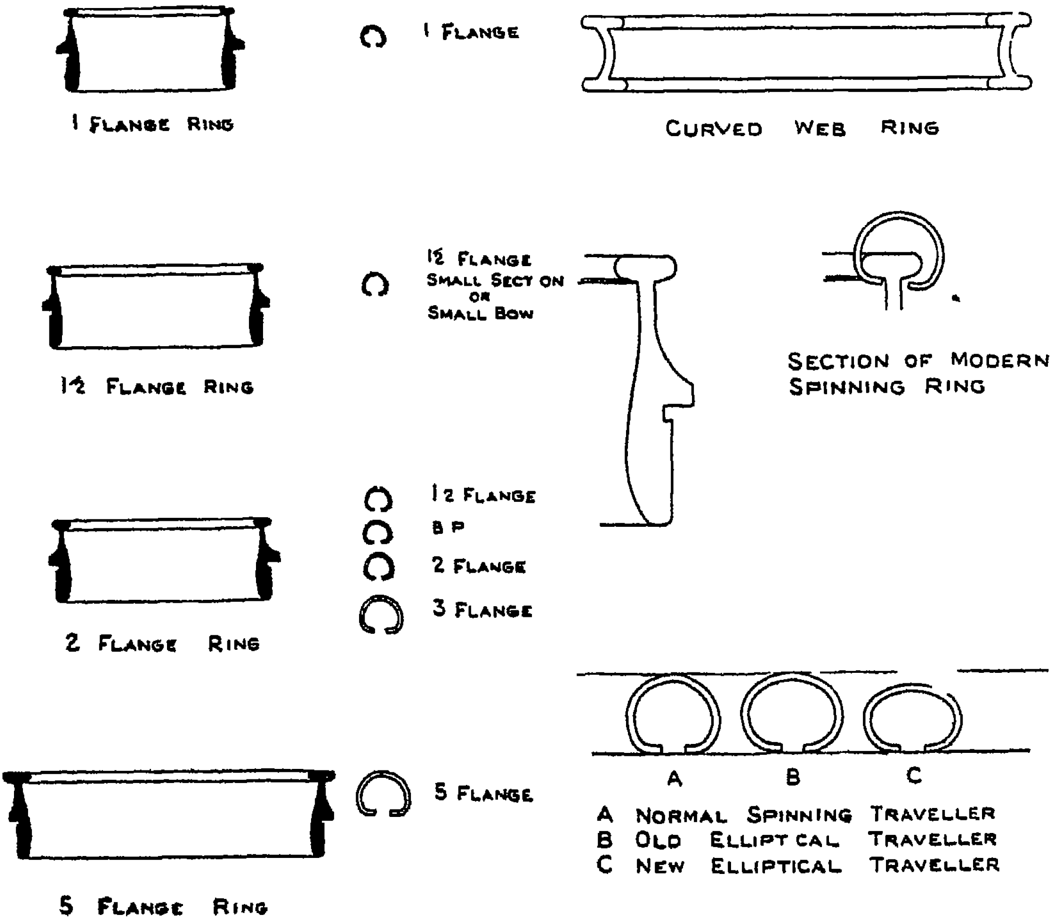
* By Donald Eadie, in a lecture before members of the Textile Institute, and extracted from *The Journal of the Textile Institute* for December.

Fig 1—Spinning Rings



(a) (c)

Possibly the greatest difference between British and American practice, however, is to be found in the temper of the travellers To some extent this applies also to some Continental countries Different countries show a marked preference for hard, medium or mild-tempered travellers This country favours the medium or mild, while U S A insists on the hardest possible We have to bear this in mind when executing our orders I shall have a little more to say on the subject of traveller temper below

Now let us turn our attention to the rings and consider the factors which permit of the highest speeds These are (1) the use of the best possible material, homogeneous and free from spots and which hardens well, (2) correct design in relation to the traveller used, (3) workmanship, in which is included hardness and finish The essentials of good design are freedom for the traveller and a well shaped bearing

Fig 1 (*b*) shows a ring traveller in its normal running position on the flange of a spinning ring You will notice that the inner toe of the traveller runs just clear of the web of the ring and that the bearing of the traveller on the ring has been kept as large as possible so as to minimize wear If the bearing were allowed to be at the toe it would be very small indeed and would soon wear

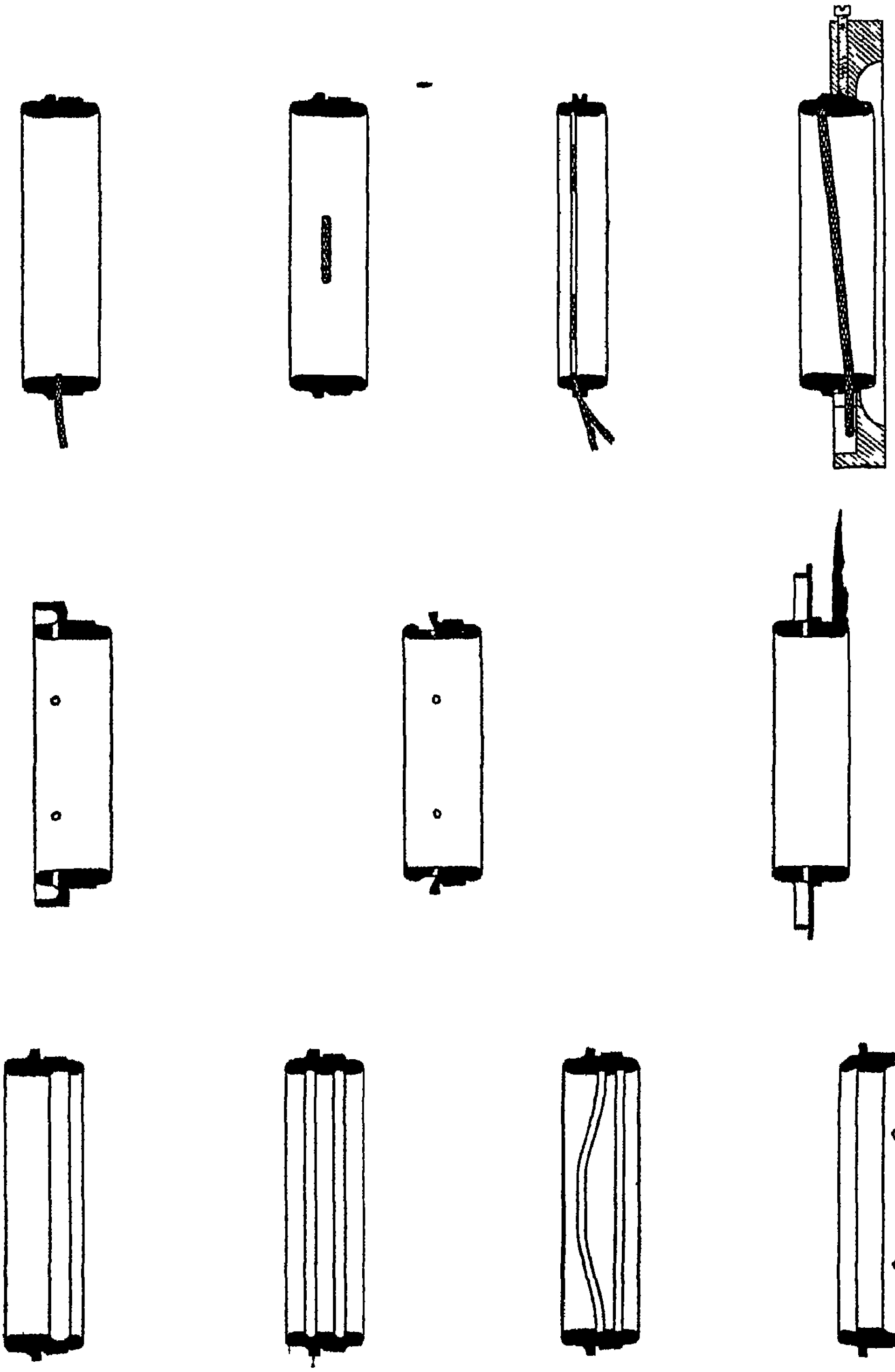


Fig 7 —Doubling Rings

(*a*) Grease Lubricated Rings

(*b*) Oil Lubricated Rings

(*c*) Oil Lubricated Rings using Wick Feed into the ring web We have several times come across rings where the web has been left too thick so that the travellers clipped and held it—naturally they would not work at all Spinning ring design seems to have resolved itself into the present style all over the world, and although we have put out many experimental lots embodying slight variations, we have never received a report about them that justified any important change

A good bearing surface is of the utmost importance to travellers running at speeds of 60 ft per second and upwards You may not have realized it, but it is none the less an everyday job for a traveller to run as far and as fast as The Royal Scot " Four hundred miles in 8½ hours is what this famous train does, but this only works out at 68 ft per second, and as I shall show you presently, travellers are running at almost twice this speed The ring must therefore be polished and burnished to the highest possible extent so as to help the traveller to give a useful life In the old days it used to be essential with new rings to reduce speed and fit travellers two or three sizes lighter Speed was then worked up gradually and heavier travellers used till the old maximum was reached again This was a slow and expensive process, and many mills now buy super finished rings at a small extra charge because the period of running in is thereby greatly shortened This first came to my notice some years ago when a Continental millowner told me that by paying 10 per cent extra for super finished rings he had been able to work up to his maximum of 11,500 r p m in nine days I do not know what size the rings were, but if they were 1½ ins , the traveller velocity was over 80 ft per second No other such outstanding performance with new, unlubricated rings has ever come to my notice The effect on the traveller of a poor bearing surface is to generate heat, and the effect of heat is to soften (or temper) the metal by drawing out the hardness The common complaint is ' My travellers are burning away " Now travellers are made hard and brittle to start with, and then tempered down so as to give them sufficient spring to withstand the strains of going on to the ring and of running at high speed over indifferent surfaces, such as old rings Not only do different sizes require different tempers but also different markets have their individual fancies Tempering or softening induces changes of colour in the steel, so when a traveller changes colour in use it is being softened and worked beyond its useful limit The cause is excessive friction which may be due to new rings, high speeds, excessive weight or dirt When conditions are perfect and a lighter traveller will not give the results required and discoloration still continues, then you may know that you have gone beyond the useful limit This limit for unlubricated spinning rings has been put at 70 to 75 ft per second by three different competent authorities, a Continental ring maker, a Continental machinist, and an American ring-maker Reduced to an easily appreciated form, this is roughly equivalent to 10,700 r p m with a 1⅝ ins ring

Until a few days ago I was quite satisfied that this speed of 70 75 ft per second did in fact represent something near the maximum, but my ideas have just been upset by some figures received from America These all apply to big package spinning installations, and they run up to just over 100 ft per second I shall have more to say about these later in this paper

To return to the subject of the useful maximum for unlubricated steel travellers, whilst I shall show you one or two examples exceeding this so called limit, I have particulars of three separate attempts in different parts of the continent to spin on dry rings with traveller speeds round about 90 ft per second That is to say about 20 per cent higher than the useful maximum mentioned just now One of these was just able to produce results for about four weeks, starting with freshly burnished rings, but at the end of that time deterioration of the ring set in and spinning became impossible The other two attempts were both abandoned

There are various factors which are easily overlooked in connection with extremely high traveller speeds For example, centrifugal force or the pressure of the traveller against the ring increases according to the square of the velocity, so that if you raise the speed with a 2¼ in ring by about 10 per cent you get something like 24 per cent increase in the centrifugal force A traveller weighing one grain and running on a 2-in ring with a spindle speed of 10,000 would be thrown against the flange of the ring with a force of approximately 6½ ounces were it not for some offsetting pull of the yarn

I have seen it stated that higher speeds are possible on larger rings because the traveller is not called upon to change direction so sharply, and certainly our highest recorded speeds are on fairly big rings For instance, the three unsuccessful attempts on the Continent to spin at 90 ft per second were all on smallish rings, certainly under 2 ins Whereas the successful American attempts are mostly on 2½ and 3 in rings

At high speeds there is a tendency for the travellers to be thrown outwards to such an extent that they may rub heavily on the outside of the ring This is curable by the use of travellers with a smaller bow if other considerations allow of it

A point which sometimes arises between the ring user and the ring maker is the question of unroundness Now although the amount of unroundness has been greatly reduced in recent years owing to better control of the heat treatment, there is still a certain amount of distortion, and in this connection you will be interested to hear of the following test carried out in 1923 at the Whitinsville Cotton Mills, at Whitinsville, Massachusetts The test was carried out on a frame of 176 spindles, and one side, of 88 rings, was selected for roundness and the other side held rings from 002 in to 027 in out of round The spindles were most carefully set at top, bottom and middle positions of the rail, the rail being raised and lowered as many as six times in certain cases to get the spindles accurate The rings were 1 flange reversible of 1 11/16 in diameter, the counts were 32's twist, and the spindle revs were 9,400 Average room temperature and wet-bulb readings were taken throughout The test ran three weeks and travellers were changed every third day The results were as follows in ends down —

	Round	Out of Round
1st week	183	161
2nd week	151	113
3rd week	190	177
	524	451

An average of four against five in favour of the unround rings. The number of ends down were counted separately for every one of the 176 rings, and five of the round rings exceeded ten breaks in the three weeks and seven of the unround ones did the same thing. The yarn from all spindles is reported to have been equally good by appearance and test. The manager's remark at the end is illuminating. He said: "How much out of round do my rings have to be to give me perfect spinning?"

DOUBLE RINGS AND TRAVELLERS

As in the case of spinning rings, they vary in size of bearing according to the work they have to do, but by far the greatest proportion are of the standard type. This type actually handles work from heavy tyre cords down to 120 s twofold. In this country nearly all doubling is done on this type of ring, as it is the only type that can be adequately lubricated. Abroad, particularly in France, there is a lot of dry doubling carried out on spinning section rings with the travellers running unlubricated, but this work is fairly severe on the rings.

The alleged advantages of using a spinning ring for dry doubling were once explained to me by a French machinery agent as follows: "If frames are to be fitted with a 'cop building motion' I never recommend grease-lubricated doubling rings as the dirty traveller is constantly running close to the yarn. With a taper build the traveller only gets close to the yarn as the bobbin fills up all over." He went on to say that spinning shape travellers are also more satisfactory and cheaper than fine ear shaped doubling travellers, and this far more than compensates for the 50 per cent reduction in the life of the rings.

Several different metals are in common use for the travellers, such as steel, various analyses of brass, phosphor bronze, etc.; stainless steel, monel metal and German silver have also been tried. These metals have different characteristics which appeal to certain users. For instance, phosphor bronze has better wearing qualities than most of the copper alloys, whilst its coefficient of friction is not much different. Steel is liable to rust, has a higher coefficient of friction, but is harder. German silver does not rust and is fairly rigid, which is an advantage in certain cases.

It is interesting to note in connection with doubling travellers that the high speeds in parts of the Continent have resulted in a considerable change over from brass wire to steel wire, as the brass was not stiff enough. This applies, for instance, in a country like Switzerland, where 105 2 yarns were being doubled a few years ago on 1^{1} in. rings at such high speeds as 12,000 r.p.m., and in some cases even 13,000. And now even the steel traveller does not seem to be stiff enough, according to one customer who is running at 11,000 with 2$_{4}$ in. rings.

LUBRICANTS AND LUBRICATED RINGS

Lubrication of doubling rings has been the subject of a great many patents, some inventors set about trying to make more effective use of grease, others tried to use oil. Before we consider any of these in detail let us look into this question of oil or grease. In the common doubling ring grease is applied by hand to the

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inside of the ring The first revolution of the spindle whips the traveller through the grease, and I have seen an estimation that only about one fifth of what is applied ever lubricates the traveller —the rest flies off on to the floor, etc I do not think this figure is quite right, but anyhow a great deal is wasted The grease has the consistency of clotted cream, and the traveller is shaped so as to leave a reserve at the top As the ring warms up, the grease slowly runs down and lubricates the traveller bearing, and is finally thrown off under the plates by the little end of the traveller The advantages of grease are that it ' stays put long enough to do its job (or nearly so), it can be obtained practically stainless, and it is a good lubricant when the quality is right This matter of quality must not be overlooked In grease you only get what you pay for, and there is no difficulty in making up a grease which contains from 20 per cent to 30 per cent of water

Now what are the disadvantages of grease? Firstly, it has to be applied by hand to each individual ring and the frame must be stopped If the work is either so heavy or so fine that greasing has to take place more than once per doff there is considerable loss of time Grease is, of course, affected by the temperature of the ring and by the atmospheric temperature In a hot room it thins and runs off quickly, whereas in a cold room it may be in a crumbling condition and get knocked off the rings without doing much good Lastly, the grease thrown off by the travellers collects in a nasty black mass under the rails from whence it is a tedious process to remove it

It has always been realized that oil would be as good a lubricant as grease, but the difficulty until recently has been in getting it to stay on the bearing surfaces A few doublers have applied it with a brush to the ordinary doubling ring, but it tended to run off much too quickly

The various systems of wick feeding not only overcame this difficulty but they enabled the doubler to cut out all stoppages for lubrication Oil, of course, is practically unaffected by the changes of temperature experienced in a mill, so that unless the supply is interrupted, lubrication should remain almost constant at all hours of the day and at all stages of the build Again the surplus lubricant thrown off on to the under side of the rails is easily removable with a cloth, and this represents some saving of time

One of the oil lubricating rings was made by my firm over twenty five years ago It is illustrated in the first figure of Fig 2 (*b*) The special lubricant was put in the well round the ring top and flowed down the holes to the traveller bearing surface This idea has been revived in two different forms by others in the last four or five years, but it has not been widely adopted so far as my information goes In one of these a ring is pressed into an aluminium plate holder, the ring having holes through which the lubricant comes from special wells in the holder

Holes in rings have two disadvantages—they are inclined to get clogged with dirt, and they are also inclined to make the travellers jump, if they are actually on the traveller bearing surfaces We have seen this on worn samples, and there is nearly always a mark or hole just where the traveller lands after its jump Incidentally, if the traveller does jump or get a bump it is surprising how quickly it wears a spot on the hardest ring. I remember once investigating a ring complaint where the contention was that we had made our rings from steel tube containing a longitudinal flaw, as nearly all the rings were worn at one spot after a few months' use. Well, first of all we don't use tubing, so that disposed of the longitudinal flaw theory. Secondly, our tests of the worn spots showed them to be as hard as the rest of the ring. To cut a long story short, we found in the end that the spinner had set his traveller clearers so close that they were making the traveller jump: the alleged flaw was where they landed.

Next consider the wick lubricated rings, which are of several kinds. The simplest of these was really a standard type of doubling ring with the addition of a hole bored through the wall in which a wick was inserted giving point lubrication. This wick connected with a reserve somewhere on the rail or in the holder. (See the first figure in Fig. 2 (c).)

Another wick lubricated ring had two holes close together with the wick laced between them in a shallow slot (second figure in Fig. 2 (c)).

A third type has one or two grooves completely encircling the inside of the ring. In the grooves are a number of holes through the wall of the ring and a wick or wicks are laced in and out as many times as are necessary to ensure sufficient lubrication for the work to be done. The arrangement is shown in the third figure on Fig. 2 (c).

Wherever wicks are employed the reserve of oil is held either in each individual holder or in a common reservoir filled with felt provided in the rail. This type of ring has not found much favour yet outside of the United States, but over there some surprisingly fine performances have been put up, not only with cotton but with worsted and silk as well, but particularly with silk. The highest traveller speed that we know of has been achieved on this ring, namely 11 400 r.p.m. spindle speed with 2¾ in. rings on a Fletcher silk twister. This was not done on one or two spindles as an experiment but in bulk, and on the strength of it a further 5 000 rings have been installed. The traveller speed in this case works out at about 136 ft. per second—roughly the equivalent of 18 000 revs. with 1¾ in. ring.

Finally I illustrate another type of wick oiling ring, of which nearly a million are in use (the fourth figure on Fig. 2 (c)). Sufficient oil for several days' running is applied to a felt pad sunk into the existing ring rail. This reserve connects with a spring wick clipped into a helical groove on the inside bearing surface of the ring. The object of a helical as opposed to a horizontal groove is to secure even distribution of the oil over the whole bearing surface of the traveller. The traveller draws off the oil by suction, the flow starting and stopping automatically.

Control of the rate of feed is obtainable through the heavy felt pad in the rail, which can be made to feed the wicks just sufficient oil to maintain a constant film between ring and traveller. Experiments with wick lubrication show that the wicks cannot be allowed to dip into free oil unless some control is introduced to check the flow.

The system is in operation on all sizes of ring from 1¼-in. to 5½-in., and appears to be equally satisfactory for any size. The increase in production due to freedom from any stoppages for lubrication is considerable and easily calculated. The increase in spindle speeds varies to an enormous extent, but has been greatest in this country where speeds have been low. Twenty-five per cent. increases have been quite common here.

The even lubrication afforded by wick oiling has resulted in more regular twist, which has appealed to many doublers. It has also given such a smooth and even run to the traveller that the reduction in drag had to be made up by using half a size or a size heavier traveller.

The following are three examples of the benefits of wick lubrication:—

Firm A was doing 100/2 voile yarn with 70 turns on 1$_8$-in. rings at 8,000. They stated that this was their maximum with greased rings, but since they have adopted oil lubrication they can run successfully at 10,000—25 per cent. rise in speed, from 18 metres to 22½ metres per second.

Firm B was putting 50 turns of twist into real silk on grease-lubricated doubling rings, 1⅞ in. diameter, at only 5,500 revs. They found it necessary to stop the frame some time before the bobbins were quite full in order to re grease the rings. This was a slow process, as it had to be done with a thin-bladed knife owing to lack of room. They went over to wick lubricated rings, and are now running at 7,500 revs. with no stoppages between doffs. This increase in speed is 36 per cent.

In the United States, silk twisters have been limited to speeds of 3,500 to 4,500 with their special rings and bar travellers. With the aid of the laced type of wick oiling ring they are now advertising that their frames can be run up to 10,000 revolutions.

There is one difficulty which may arise in the case of rings with controlled oil lubrication. When a great deal of water is used, as in the Scotch system of doubling, the natural gum tends to get washed out of the cotton and accumulates on the outside of the ring top. In this position it causes trouble in starting up, as the head of the traveller is pulled on to the stickiness and the end comes down. With greased rings this does not happen to nearly the same extent, as the grease is applied to the ring top and some finds its way over on to the outside, where it prevents the stickiness from taking hold. This difficulty caused us a good deal of trouble, but after we found that it had nothing whatever to do with the lubricating oil, and everything to do with the amount of water used, we began to see daylight. I think we may claim to have got over the difficulty now by brushing the travellers once or more per doffing with a brush dipped in a special oil which keeps the gum from getting tacky.

"BRASSING."

No talk on doubling rings and travellers would be complete without some reference to that bugbear of the wet doubler—brassed rings. Rings are said to be "brassed" when the brass of the traveller has been deposited on the bearing surfaces, and it is comparable to "running a bearing" A brass traveller careering round a steel ring at some 45 m p h must be adequately lubricated There must be a film of oil between the traveller and the ring, and so long as this oil film is maintained no trouble need be expected, but should the oil film break down, the rubbing surfaces rapidly become dry and trouble is the inevitable result Minute particles of the traveller are rubbed off, and become deposited on the ring surface, increased friction is set up, speed is reduced, and the results are thus very similar to a "run" or "seized bearing

This can happen very quickly, in fact, a few minutes of oil shortage and the damage is done It can also happen owing to the use of a poor quality of lubricant or to overloading There is only one cure The rings must go back to a maker to be cleaned up When you think of the monotony of hand greasing hundreds of rings several times a day it is not to be wondered at that the work is sometimes "scamped" or that a few rings get missed There is yet another way in which it can happen Grease is sometimes kept in a very cold store, so that it is brought to the operative in a crumbling condition more like cheese than cream Naturally it does no good in this state, and gets knocked off by the first revolution of the traveller The moral is keep your grease in a moderate temperature

(This article will be concluded in our next issue)

NEW BALL-DRAG SHUTTLE.

Two Burnley men have introduced a shuttle improvement which should be of great service to the weaving industry The invention, which has been patented, takes the form of a ball-drag or ball-tension shuttle

This method of putting tension on cotton yarn is seen in various forms on preparatory machinery of the winding-frame and and other types of mechanism, but the inventors claim that they are the first to adapt a form of this tensioning device to the shuttle

It is claimed that the new shuttle is so made that ballooning is reduced to a minimum, and cockled, rough, uneven selvedges are prevented These twin evils have hitherto been combated in a most unsatisfactory manner by the application of "mops" in the weft tunnel of the shuttle

The ball drag shuttle collects practically no dust, for the metal ball is constantly changing its position owing to the vibration set up by the moving shuttle

This ball is in constant contact with the weft flow and it is confined within the shuttle in such a manner that it cannot possibly come out As the shuttle is checked or pulled up abruptly in the box the ball puts a brake, as it were on the weft This happens at each side of the loom and thus counteracts any tendency the weft may exhibit to form an unduly large loop

The makers of this new shuttle are Messrs Thomas Comstive Ltd, Calder Vale Road, Burnley

Sizing, Finishing and Printing Materials.

*By G. F. DALENOORD.**

MANY dyeing and bleaching operations have been thoroughly investigated both from the scientific and the mechanical side, but others, e.g., sizing and finishing, are only at the beginning as regards scientific control, and there will undoubtedly be great developments in the near future. The notes which follow are specially concerned with (1) sizing, (2) finishing, (3) printing.

(1) SIZING.

The fundamental purposes of sizing are (*a*) to give to the yarn the necessary stiffness, strength and elasticity, to enable it to withstand the mechanical operations of weaving, and (*b*) to give the yarn compactness and smoothness in order to reduce frictional resistance during the mechanical operations of warping and weaving.

Whilst in the loom the warp has to withstand many mechanical influences, some of which act on the yarn internally and some on the surface. Those influences which act internally are (1) the tension given to the yarn in the loom, and (2) the motion of the reeds, which alternately slackens and strains the warp at regular intervals in driving the weft into the warp. The influences which act superficially are (1) the eyes of the healds through which the yarn passes; (2) the reed which moves forward and back along the yarn, and so rubs the surface; (3) the rubbing of the yarns one against another; and (4) the shuttle which rubs against that portion of the warp over which it passes.

Apart, therefore, from the normal strains imposed on the yarn, irregular tension-effects as well as a rubbing action are induced; hence the yarn must possess elasticity and have as smooth a surface area as possible. Raw yarns are invariably sized so as to enable them to better withstand the influences enumerated. In the linen, cotton, and jute trades, an additional object of sizing is to give the yarn a certain feel, fullness and weight, so that the cloth coming from the loom has the desired finish.

The products used in sizing are (1) stiffening, strengthening, and smoothing agents—e.g., starches, gums, glues, etc.; (2) softening agents—e.g., fats, resins, oils and soaps; (3) hygroscopic products—e.g., salt, glycerine, glucose, magnesium and calcium chlorides, etc., which attract moisture from the air; (4) preservatives—e.g., zinc chloride, copper sulphate, salicylic acid, Shirlan, etc., these retard the development of mildew, and liquefaction of the size; (5) weighting products—viz., china clay, french chalk, calcium and barium sulphate, Epsom salt, Glauber's salt, etc.

The first requirement for scientific control of sizing is a knowledge of the influence of the different products on the yarn. This can be ascertained by laboratory tests on breaking strain, elasticity, rubbing strain, etc., on yarns treated with the different products. But there is also the question whether the chemicals are to be put into the thread, on to the surface, or both. It is also necessary to know whether, if two chemicals are combined, the combined influence is what might be expected, or whether there may be some unknown reaction, whereby the one influences the effect normally produced by the other. Laboratory controls are much better than formerly, but the results are not quite the same as the results found in practice.

The staff of the firm in Groningen, with which the author is connected, have made numerous tests extending over several years. Various starches, modified starches, glues, natural gums, and modified gums have been compared, the various materials being used in quantities representing equal money values; and the production figures and number of breakages in the loom were ascertained. As softener, a uniform addition of beef-tallow and a little glycerine was made in all the experiments.

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* Of Messrs. W. A. Scholten's, Chemische Fabrieken, Groningen, in a lecture before the Huddersfield Section of the Society of Dyers and Colourists. The present article is only an extract.

The following range of values was obtained: Quellin 100 per cent, soluble cornstarch 88 per cent., solubilized gum 84 per cent., glues 76 per cent., farina 74 per cent., cornstarch 72 per cent., natural gum 68 per cent.

Further work on various kinds of fibre led to the following observations, which are in general agreement with those of other workers :—

(1) The best results in weaving are obtained if the size has penetrated into the thread and is also laid round its surface.

(2) Pure starch sizing gives to the thread a higher breaking strain and a higher resistance to rubbing, but may diminish the elasticity somewhat. The results differ for different starches, and are proportional to the amount of starch.

(3) Soluble starches give better results than natural starches, as regards elasticity. Quellin gives specially high elasticity and strength figures.

COMPARATIVE FIGURES

	Unsized Yarn	Sized with	
		Starch	Quellin
Average breaking strain (60 tests)	174·2	189	205
Maximum breaking strain	226	238	255
Minimum breaking strain	116	104	176
Irregularity (per cent.)	8·2	15·5	6·1
Elasticity	7·3	3·9	5·8
Rubbing	10	24	28
Loom output	—	74%	83%

(4) Pure glue size gives a lower breaking strain, a higher resistance to rubbing but a much lower elasticity, as compared with starches. These results differ for different glues.

(5) Pure gum sizing gives a somewhat lower breaking strain, a higher resistance to rubbing, but a much lower elasticity, in comparison with starches, the results varying with different gums. Solubilized gums are better than natural gums, especially as regards elasticity and breaking strain.

(6) Softeners (fats) used alone as sizing material decrease the breaking strain and elasticity, but increase resistance in rubbing.

(7) Hygroscopic materials used alone increase elasticity, but decrease resistance to rubbing. With increasing amounts of these materials, the breaking strain first increases and then decreases.

(8) The less viscous a solution, the more of it will be taken up by the thread, and the more it will penetrate into the thread.

(9) The less viscous the solution the lower the amount of dry material which will remain in the thread.

(10) The penetrative power of a solution depends not only on the viscosity, but also on the weight of the roller of the sow box.

(11) The larger the amount of dry material in the thread, the greater is the weaving efficiency.

(12) The more starch in the thread, the higher the breaking strain the higher the rubbing strain, and the lower the elasticity.

(13) The effect of size round the thread, i.e., on the surface, is not the same as the effect of the size in the interior of the thread.

(14) The more starch round the thread, the higher the breaking strain, the higher the rubbing strain, and the higher the elasticity, up to a certain point, after which it decreases. Soluble starches give better results than ordinary starches, as regards the effect of that portion superficially fixed.

(15) Softeners round the thread act similarly to those within the thread.

(16) Starch used with fats, either in or round the thread, affects the rubbing strain, breaking strain, and elasticity less than starch used alone.

(17) If the sizing is done in two operations, i.e., first with starch alone and then, after drying, with fats alone on the surface, the thread has an equal breaking strain, a slightly better rubbing strain, and a better elasticity than with a simple sizing with starch alone.

(18) Addition of hygroscopic materials up to a certain point increase all the qualities, especially the elasticity and the rubbing strain. Above this point a further addition decreases these qualities.

(19) Addition of weighting materials decreases all qualities; this defect can be cured only by the use of a larger quantity of starch and hygroscopic material.

(20) Preservatives have no influence whatever on the weaving properties of the yarn.

These various observations lead to the conclusion that the best sizing material is starch, especially soluble starch with the addition of a little hygroscopic material, but this seems to be contrary to practice, where it is found that the addition of fats always gives better results in weaving. The explanation appears to be that starch alone imparts such stiffness to the yarn and makes it so non-elastic that it does not readily follow the motion of the reeds, and this causes irregular and intermittent tension on the thread.

Consequently, if a starch could be produced having a binding and strengthening power equal to, or better than, that of the starches used hitherto, but which gives less stiffness to the yarn and does not reduce the elasticity, sizes might be made without any fat, and the yarns sized in this way would weave better.

The best results are obtained with a soluble starch, which penetrates and envelops the yarn, has great binding and adhesive power, retains the elasticity of the yarn, and after drying, is not too hard, so that it is not necessary to use any softener.

The lecturer's firm had manufactured three materials which it was claimed possessed the above qualities.

Quellin is a pure vegetable starch product. It is neutral and has three to four times the binding power of ordinary starch. It strengthens the thread enormously as is shown by the following figures, due to P. Krais :—

	Per cent. used	Increase in Strength due to Sizing
Dextrin	1¼	0·85 lbs.
„	10	5·25 lbs.
„	40	12·50 lbs.
Farina	2½	3·50 lbs.
Quellin	2½	5·85 lbs.
Solubilized starch	2½	2·50 lbs.

Quellin leaves the thread very supple and elastic, some comparative figures being :—

	Elasticity of Sized Yarn Per cent.
Unsized yarn	8·4
Farina	4·1
Solubilized farina	4·3
Glue	2·9
Cornstarch	3·9
Wheatstarch	4·4
Solubilized wheatstarch	4·7
Quellin	6·1

Experience shows that when quellin is used as a sizing material the quantity of softeners used can be diminished, and often they can be entirely omitted.

Quellin is soluble in cold water, producing a clear, thick solution of high viscosity by adding 1 lb. quellin to 1¼ gallons of cold water (never the reverse) whilst stirring. This solution first envelops the yarn, but afterwards penetrates to some extent, Thick, open yarn is sized with thick size made from textiline W. Thinner and higher-twisted yarn, with thinner size (textiline W1), whereas superdex is a special product for sizing artificial silk.

Hitherto one of the drawbacks of soluble starches has been that on long boiling they lost part of their adhesive power. The above-mentioned new products, however, may be boiled as long as desired.

The general advantages of a sizing based on these researches may be summarized as follows: (*a*) The thread is more supple and elastic, and is well laid; (*b*) the addition of fats is reduced to a minimum; (*c*) owing to the great binding power dusting-off is overcome; (*d*) tints of coloured warps are undiminished in brightness; (*e*) the mixings have good penetration; (*f*) fewer breakages occur in weaving, thus giving increased production.

Sometimes heavy sizing of cotton is required, so that finishing is superfluous. For this and other purposes a few general hints may be useful: (1) Tallow or fats are not binders, and should be used as little as possible. (2) Weighting materials are not binders, and have to be stuck to the thread by using more starch. Therefore a starch should be used with the greatest binding power, e.g., quellin. (3) Uniform weights are wanted, hence the recipe should be as simple as possible. (4) When the material dusts off it is not only lost but the dust is a nuisance, therefore the recipe should be planned to prevent this defect. (5) Greater humidity is wanted, hence hygroscopic materials are used.

(2) FINISHING.

The main object of sizing is the same for all kinds of sizes and for all fibres, whereas finishing covers a much larger field. Starches are largely used in finishing for stiffening, filling, weighting, smoothing, and strengthening, as well as to cause other filling and weighting materials to adhere closely to the cloth, so that it appears thicker, closer and heavier.

(1) *Stiffening* is required in the cotton, jute, and linen trades. This stiffening is done mostly by filling on a two or three bowl mangle, or by backfilling. A starch with a high penetrative power is required, so that it does not lie too much on the surface. The starch must also be very soluble, so that a large amount can be put into the cloth in one passage. With natural starches, e.g., farina or sago, two to six passages may be necessary to produce a certain result. A paste of 1 lb. farina or 1¼ lbs. sago per gallon gives a hard-feeling cloth, due to the surface film, and if a coloured cloth is finished in this way the colours are much affected whilst the cloth feels thin and papery. A second passage places still more starch on the surface, and the drawbacks are more pronounced. The finish also may soon crack and lose its effect.

Some finishers produce animal glue for this purpose, and get good results, but the process has several drawbacks, e.g., the cracking of the finish, and its stickiness; if the cloth becomes damp an objectionable smell may develop, especially in warm warehouses; the preparation of the paste is also difficult. The thin-boiling soluble starches, textiline W1 and superdex, are very useful in such cases, as both give strong solutions. Superdex can be used for a 1 : 1 paste, i.e., 10 lbs. superdex per gallon of water. The solution is as clear as water; that of textiline W1 being slightly opaque. Their penetrative power is so great that the thread is absolutely loaded with the soluble starch. The piece is very hard after drying, and, especially when superdex is used, very full, and possesses considerable pliability.

In the Sarong trade for the Rangoon market, where the colours have to remain bright and the cloth has to be made very stiff, superdex has completely replaced dextrin; the colours are much brighter, and the finish is fuller. In general, 3 lbs. superdex replaces 4 lbs. white dextrin.

(2) *Filling* is generally carried out with starches together with softeners. It is not advisable to use dextrin for this purpose, because it makes the cloth too papery, while all ordinary starches make it too hard, to prevent which a large amount of softener must be added. This is liable to make the cloth feel either too greasy or too damp. Here the use of quellin is strongly recommended, as it fills the cloth well without making it stiff and hard. Black sateens, e.g., may be filled with 10 ozs. of this substance per gallon, the cloth being thickened up considerably.

(3) *Weighting* is often done with Epsom salt, china clay, french chalk,

etc. Metallic salts used alone or with oils, dust off readily, and, when used in large amounts, starches have to be added. Superdex is well adapted for this purpose.

When weight has to be given with starches alone, the thinnest boiling starch, superdex, will give the best results. It can be used in a solution of 10 lbs. per gallon; this loads the cloth heavily.

(4) *Smoothing the surface* chiefly concerns white or lightly coloured cloths. It is almost always done by backfilling. The object is to produce on the cloth an adhesive, smooth film of an insoluble white substance, e.g., china clay, french chalk, mineral white, etc. At the same time, the spaces between the threads of the cloth have to be filled with the finish in such a way that after drying it cannot dust-off. It is necessary, therefore, to use a considerable quantity of adhesive material. Here textiline W and quellin prove extremely useful, both, and especially the latter, having great binding power; 1 lb. quellin easily binds to the cloth 20 lbs. china clay. Notwithstanding this important property, both products give a nice full feel, without making the cloth too stiff. This quality enables less fat to be used, and the breaking-down of the finish in mangling or beetling is facilitated.

(3) PRINTING.

Thickening agents of the most divergent kind are used in textile printing; this is due to the varying requirements of the multitudinous designs as well as to the nature of the printing colours themselves. Insufficient attention appears to have been devoted hitherto to the problems associated with the uses of thickening agents in printing, but the correct choice of an agent of this kind deserves as much attention as that which is devoted to chemicals and colours.

The printing colours are adapted to the different requirements of the printer by the use of the available thickenings and their combinations in various ways. It often occurs, therefore, that the same dyestuff is printed with different thickening agents, according to the variable factors which govern their choice.

Correct choice can be determined only by experience. The colourist must be familiar with the properties of each thickening agent and the effects it gives under different conditions, either alone or in combination with others. Inferior prints are frequently the result of a wrong application of thickening agents. It will be evident, therefore, that it is not possible for suppliers of new thickening agents to give exact printing instructions.

Excellent thickenings can be made from a combination of crystal gum and starches. After long tests in industrial practice and in laboratories, the firm with whom the author is associated has introduced nafka crystal gum 1, extra-D, A and A-extra; and nafka thickening B.G. and S.T. Their general utility has been established for some time.

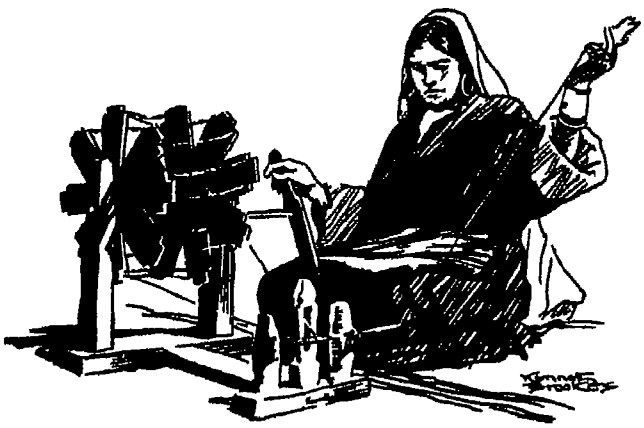
It is well known that a colour thickened wholly or partially by means of starch gives a darker print than the same colour thickened by gum. This result indicates that starch thickenings are more advantageous than those made from gum, but there are many cases in which crystal gum thickening is used in spite of this difference in depth of colour.

If, e.g., a crystal gum thickening and a starch thickening of similar viscosities are thinned down in the same manner with water, the starch thickening loses its coherence (i.e., it becomes watery and sloppy), but the crystal gum thickening does not. This is especially noticeable if the thickening contains acid. The greater coherence of the gum thickening is evident from a comparative test, using a basic colour and acetic acid. When prints made with such a mixture are steamed it is often found that owing to the slight dampness of the cloth starch thickenings are not able to retain the colour completely, and " spreading " may occur, whilst there is a tendency for the impression to be " soft " and " spongy." When a gum thickening is used these defects do not occur.

Another example may be noted in support of these statements. Two printing colours (vat dyes) prepared in exactly the same manner, with starch and crystal gum thickenings respectively, were printed, in turn, with the first roller, and the prints from the following roller or rollers (in two- or three-colour designs) with the other colours chosen passed over the trial colour in the two experiments. After ageing, washing, etc., a great difference was found in the two cases. The trial colour, thickened with starch, was shabby and uneven whereas the gum-colour-print was smooth, regular and even. This difference is due to the fact that a gum thickening has a finer structure, and therefore spreads better and in a more uniform manner than a starch thickening, more of the latter remains on the surface of the fibre compared with gum. When crushed by the following rollers, the starch colour-prints are pressed into the lower parts of the threads, so that the upper thread layers exhibit a bare and shabby appearance. This trouble does not exist when a gum thickening is used, as in this case the printing colour is easily and equally absorbed by the fibre. Considerable improvement may also be effected in many cases by replacing only part of the starch by gum in the printing paste.

The fact that a thickening derived from starch products spreads less than a crystal gum thickening is the cause of much colour being left on the surface of the fibre in ordinary practice, this effect conveys to the eye the impression of a comparatively darker colour. Apart from the disadvantages noted, it is well known that the fixation of the colour on the fibre, when using a starch thickening, is not of the same high standard obtained with gum thickening. Moreover, a starch thickening cannot be easily washed out, especially if the washing and soaping process is done on the open washing machine. This residual starch inhibits the production of fine, full, and supple finishes, and may retain the unfixed part of the colour. This is one of the causes of colours thickened with starch giving darker shades. They become considerably lighter, however, after a good soaping. Prints of fast vat colours often show this phenomenon.

Summarizing the points discussed it is to be concluded that crystal gum thickenings give smoother and more even printings and cause a better fixation of the colour than starch thickenings. The latter deposit the colour more on the surface of the texture, whereby a darker colour appears to be obtained. Difficulties associated with washing out and fixation are not easily solved.



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Agreement on More-Looms-to-a-Weaver System in Lancashire.

THE dispute in Lancashire upon the more looms-to-a-weaver system was concluded in an agreement reached between the Cotton Spinners' and Manufacturers' Association and the Amalgamated Weavers' Association on December 28 last

We make the following extracts from the agreement, but point out at the same time that it is subject to modifications, and that it has not yet been fully put into force, as further negotiations are to take place in respect of cloths other than those covered by the agreement, which are cloths made up to and including five lifts and not more than 200 threads to the square inch

GENERAL CONDITIONS

1 This List is based on conditions being provided which will enable a weaver of average ability to earn approximately 41s per week when employed for 48 hours on six running looms weaving standard cloths

2 It is understood that cloths with percentage additions will not necessarily yield the full increase in wage represented by the additional percentages

Condition Wages

3 When conditions at a mill are alleged to be such that the average wages for six running looms falls to 10 per cent below the figure in Clause 1 for standard cloths, or 10 per cent below the average wages for other cloths woven under this system, a joint investigation shall be made, if requested, in order to ascertain the facts If it is found that the conditions do not comply with what is intended, the wages of the weavers concerned shall be increased by such percentage as may be necessary to make it possible to earn a figure agreed upon by the investigators until the conditions are made satisfactory

When determining the percentages to be added the investigators shall have regard to the previous earnings at that mill and also the earnings from similar cloths in those mills where conditions are satisfactory

4 Individual or sectional complaints within a mill shall be dealt with under the procedure provided for in the Joint Rules

Prevention of Exploitation

5 Where any firm is paying weavers on this List and consistently running a less number than six looms per weaver (except as provided by the Clause governing the employment of juvenile labour and elderly people), there shall be a joint investigation upon application by either side, and if it be found that such circumstances exist in contravention of the terms of the Agreement, Uniform List prices for weaving shall be paid until the terms of the Agreement are complied with, less an allowance agreed upon by the investigators for any advantages given to the weaver

Temporary Experiments

6 As a temporary arrangement any firm may experiment with not more than 6 per cent of looms on cloths not provided for under this Agreement, upon paying a weekly wage of 45s or 10 per cent over the weaver's normal earnings from four looms, whichever is the higher

7 It is agreed that the Joint Sub Committee will continue its discussions with the object of making provision for other classes of cloths when woven on the more looms system

Displacement of Labour

8 The displacement of labour to be carried out by the management in such a way that a minimum of hardship is involved, and it is recommended that employment created for the ancillary labour referred to in Clause 10 shall be offered, as far as possible, to operatives who may be displaced by the introduction of the system

Retention Wage

9 Where a weaver is employed in the mill with four or less number of looms running out of six, under this system, the weaver shall be entitled to an average weekly wage of not less than 66⅔ per cent of such weaver's normal earnings taken over the last four full weeks, from six looms on similar cloths, or not less than 28s per week, whichever is the higher Payment for a broken week to be in proportion to the number of hours worked

The employer has the right to remove warps or play-off a weaver when 50 per cent of such weaver's usual number of looms are stopped

Ancillary Labour

10 To be provided for sweeping, cleaning and oiling looms Weavers to clean their own shuttle boxes and oil spindles Cloth carrying to be provided where advisable owing to heavy character of cloth produced The looms to be run 47¾ hours per week

Juvenile Labour

11 Juvenile and elderly weavers running a lesser number

than six looms and other weavers who for special reasons are desirous of running a lesser number of looms to be paid as per this List The total number of weavers regularly running less than six looms shall be limited to 20 per cent of the total number of looms in the shed engaged on this system

Loom Speeds

12 In all cases where the more looms to a weaver system is adopted the loom speed must be reduced in order to attain the highest efficiency

The reduction recommended is 10 per cent of the average normal speed run on the four loom system, and shall not be less than 7½ per cent of such normal speed

Warp Stop Motions

13 It is agreed in principle that an allowance shall be made where warp stop motions are provided, the amount of such allowance to be discussed later

Pick Counters

14 This question to be considered again in six months' time after the system comes into operation

Limitations of Cloths

As a temporary measure this Agreement only covers cloths made up to and including five lifts, and with not more than 200 threads to the square inch

Cloths made with two ends in a dent not to exceed 120 reed

Cloths made with three or more ends in a dent not to exceed 140 reed

Standard

The standard to be a 36 inch cloth 60 ends per inch, woven in a 60 reed 26's weft and finer counts

Basis

The basic wage is to be 17 5 pence per 100,000 picks Further additions to this basic wage are made for special reeds, greater cloth widths, coarser, coloured or bleached weft, etc

Additions and Deductions

The percentage additions for reeds shall be added to the basis price separately

The percentage additions or deductions for width of cloth shall be added or deducted from the basis price separately

The total of all other percentages for extras shall be added to the basis price in one figure

Date of Operation

This Agreement commenced to operate as and from the 2nd January, 1933, or from the first making-up day after that date

Cotton Spinning in Kiangsu Province.

(Extract of an article appearing in the "Chinese Economic Journal" for November, 1932)

THOUGH during recent years the cotton industry in Kiangsu (Kiangsu is the province in which Shanghai is situated) has gone through many disturbing experiences, and has had to face the keen competition of foreign mills equipped with higher technical and financial resources and enjoying treaty privileges, the progress made by Chinese industrialists has been gratifying According to investigations made recently, there are 84 Chinese cotton mills in the country, of which 49 are in Kiangsu There are also 41 Japanese mills in the province, of which 30 are established in Shanghai, where three British mills are also operating The following table, compiled from reports prepared by the Chinese Cotton Millowners' Association, shows the progress made in the cotton spinning industry in the province during the last 14 years

This progress is shown more clearly by the increasing number of spindles operating during the same years —

1919	889 032	(yarn)
1920	1 064 000	
1921	779 270	
1922	1 337 822	
1924	1 210 001	
	15 478	(thread)
1925	1 108 206	(yarn)
	43 376	(thread)
1927	1 145 908	(yarn)
	49 546	(thread)
1928	1 209 884	(yarn)
	49 428	(thread)
1930	1 368 794	(yarn)
	50 006	(thread)
1931	1 413 074	(yarn)
	60 548	(thread)
1932	1 580 744	(yarn)
	110 544	(thread)

Shanghai is the centre of the cotton-spinning industry in Kiangsu Province, with its 28 mills out of a total of 49, and 1,066,920 spindles out of a total of 1,580,744 Output, too, represents two-thirds—600,400 bales—of the total for the entire province, which is 914,150 bales, and nearly half the production of the whole country, 1,427,919 bales

Practically all these mills are organized in the form of limited liability corporations

The total number of spindles operating in the province exceeds

1,580,000, one mill is equipped with over 100,000 spindles, 42 have from 10,000 to 50,000, and six have less than 10,000 Eighteen out of the 49 mills are equipped with thread spindles, and over 80 per cent of them are located in Shanghai The total number of looms in the province is 13,627, owned by 20 mills, of which the Wing On Mills in Shanghai operate 228 automatic looms The spindles used by the mills are mostly imported from Great Britain and the United States Those used by the Shanghai mills are chiefly the products of Saco Lowell, of the United States, with Asa Lees and Howard and Bullough, two British makers, next in importance The spindles used by the Yeh Chin Mill of Wusih and Ta Cheng Mill of Wuchin are mainly of the Dobson & Barlow type, made in Great Britain Looms are chiefly imported from Japan, with the product of the Toyoda factory the most popular In some mills Chinese-made looms are also used, the products of the China Iron Works, the Ho Chung Iron Works, and the Ta Lung Iron Works being most widely used

DETAILS OF OPERATION

	No of mills	Total capital	No of yarn spindles	No of workers	Annual output (bales of yarn)
Shanghai	28	$51 363 000	1 066 920	65 146	600 410
Wusih	7	9 710 000	198 168	14 103	111 161
Wuchin	5	2 080 000	46 504	3 611	16 703
Nantung	2	T2 500 000	92 104	8 469	70 664
Soochow	1	$600 000	42 568	3 103	23 820
Changshu	1	T400 000 $150 000	12 740	963	7 600
Taitsang	1	100 000	25 000	1 534	16 800
Kiangyin	1	T720 000	15 000	1 300	9 200
Tsungming	1	$960 000	16 400	1 140	11 320
Chitung	1	T1 400 000	35 000	3 400	18 880
Haimen	1	$3 000 000	30 340	2 550	27 562
Total	49	$77 168 480	1 580 744	106 346	914 150

RAW MATERIAL

Although no exact statistics relating to the consumption of raw materials by cotton mills in Kiangsu are available from the report for 1932 of the Chinese Cotton Millowners' Association, figures showing the amount of cotton consumed by Chinese cotton mills in the province are obtained as follows —

	Piculs
Shanghai	2 191 550
Kiangsu (excluding Shanghai)	1 157 119
Total	3 348 669

It is to be noted that the above figures do not include the 330,000 piculs of cotton taken by the three British mills or the 2,224,475 piculs consumed by the thirty Japanese mills in Shanghai

It is estimated that almost two-fifths of the cotton consumed in Kiangsu is imported from abroad, while the other three-fifths comes either from places within the province or from other cotton-growing districts in China. The average amount of cotton consumed annually during 1927-1931 was as follows: From places within the province, 1,634,172 piculs, from other provinces, 1,134,256 piculs, imported from abroad, 2,041,765 piculs. These figures are taken from the Customs returns, cotton transported overland and by rivers being excluded, but about 100,000 piculs re-exported from Shanghai is included. Another fact which should be taken into consideration in connection with the figures just given is that some mills, owing to difficulties of various kinds, have suspended operations entirely from time to time, while others have reduced their working hours, thereby consuming less cotton than originally estimated. This helps to explain why the supply exceeds the demand by about one and a half million piculs, which was probably stored in godowns.

The cotton consumed by cotton mills in Kiangsu used to be in the proportion of 60 per cent domestic to 40 per cent imported. Kiangsu cotton from Kiangyin, Nantung, Changshu, Kiating, Taitsang and Pootung is most popular in Chinese mills, with Honan, Shansi and Hupeh cotton of fine quality sometimes used to make up any deficiency of the local product. Among the varieties of domestic cotton that from Chengchow, Honan Province, and Shansi Province is of the best quality, having length, width and twist suitable for spinning yarn of 30 counts. The Kiangyin variety is the best cotton obtainable within the province. During the last few years imported cotton has occupied a more important position than domestic, and this may be attributed to the insufficient quantity grown at home, while inadequacy of transport makes a regular supply not always possible. Furthermore, as to quality Chinese cotton is inferior to the imported article, while at the same time the low price of American cotton has been an attraction to millowners in Shanghai. As the yarn manufactured in China is rarely over 20 counts, fine cotton is not needed and American cotton only of medium grades and Indian cotton are the only descriptions imported.

OUTPUT

That the output of yarn has made fair progress is shown by the following figures, compiled from reports to the Chinese Millowners' Association from all mills in Kiangsu.*

		Bales
1919		348 409
1921		391 518
1922		560 836
1924		610 643
1925	(approx.)	600 000
1927		677 271
1928		712 406
1930		796 147
1931		939 504
1932		914 150

The above figures, although not complete, show that fairly satisfactory progress has been made. The actual amount in each case should be larger than is stated, as every year there were mills which failed to make reports to the Association, so that their output is not included in the above table

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* Figures for 1920, 1923, 1926 and 1929 are not available.

Most of the yarns produced by the Chinese mills are 10, 12, 14, 16 and 20-count Very few mills are turning out fine yarns, and in Wusih and Changchow 20-count yarn is about the finest that can be made The Wing On Mills in Shanghai, however, are the only mills which supply yarn of 60 counts, while most of the Japanese mills established in the city are spinning only fine yarns, notably the Naigai Wata Cotton Mill The following are the various kinds of yarn turned out by Chinese mills —

10-*count Yarns* —Spun with 75 per cent Yuyao cotton and

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25 per cent Ningpo cotton, only used for weaving very coarse cloth or for making ropes Some of the 10-count yarn brands are the "Sail-boat" of Taching Mill, "Kincheng" of the Wing On Mills, and "Man and Bell" of the Shun Hsin Mill

12 *and* 14-*count Yarns* —Spun with about 25 per cent Tungchow cotton, 20 per cent Shensi cotton, 40 per cent Taitsang cotton, and 15 per cent Shanghai cotton Used for weaving coarse cloths

16-*count Yarns* —Spun with 25 per cent of good quality Tungchow cotton or American cotton, 25 per cent Shensi cotton, 25 per cent Taitsang cotton, and 25 per cent medium quality cotton Brands Wing On's "Kincheng," Ta Feng's "Balloon," Shun Hsin's "Man and Bell"

20 *count Yarns, Single and Double Ply* —Spun with 30 per cent of high-grade Tungchow, Lingpao, or American cotton, 30 per cent Shensi cotton, 30 per cent ordinary Hankow cotton, and 10 per cent Shanghai cotton Used for weaving finer cloths, sheetings, drills, jeans, etc Brands Wing On's "Kincheng," and "Ta Peng," Su Lun's "Tien Kuan," Shun Hsin's "Dragon Boat"

Yarns over 20 *and under* 32 *Counts, mostly Double Ply* —Spun with Tungchow and Lingpao cotton, mixed with American cotton Used in weaving fine cloths, drills and jeans, cotton serges, sheetings and as thread for sewing Brands Wing On's "Kincheng," Su Lun's "Tien Kuan," Shun Hsin's 'Man and Bell"

Yarns above 32 *Counts, Double and Trebly Ply* —Spun with American cotton mixed with Lingpao and Egyptian cotton Used in weaving the finer kinds of cotton piece goods, serges, sheetings, hosiery and under-garments, and for making linen (linenised cotton) Brands 42-count, Shun Hsin's "Man and Bell," Wing On's "Kincheng," 60 count, Wing On's "Ta Peng," and "Kincheng"

Yarns are made into small packages of 10 lbs each, or 5 lbs for finer yarns Each standard bale usually contains 40 small packages of lower counts yarns, which are mostly used in the Chinese mills The number of knots in a package varies with the count of the yarn, e g, 12 knots of 12 counts, 20 knots of 20 counts, etc The count of cotton yarn is the number given to a yarn according to the number of hanks to the pound, thus, 12-count yarn is a yarn which weighs 12 hanks to the pound, and each hank of yarn consists of 840 yards

MARKET FOR KIANGSU YARNS

Being the centre of the cotton-spinning industry in China, Kiangsu supplies yarns to the mills in many other provinces, and a considerable quantity is exported to Hong Kong, the Straits Settlements and India Yarns consumed by Chinese weaving mills used to be imported from abroad before the domestic spinning industry was developed, but in recent years conditions have been reversed. The export of yarn increases every year, while the amount imported is shrinking rapidly. The following table shows the import and export of cotton yarn during the last six years:—

	Imported into China piculs	Exported from Shanghai piculs
1926	449,280	2,294,149
1927	295,336	2,090,260
1928	284,945	2,241,460
1929	234,126	2,200,703
1930	162,430	2,602,463
1931	47,951	2,628,222

The increased quantity of cotton yarn exported from Shanghai is indicative of the development of the Kiangsu cotton-spinning industry, as approximately 83 per cent. of the Chinese cotton yarn exported is from this port, and all cotton yarn produced in Kiangsu which goes to other ports and foreign countries must pass through Shanghai.

The major part of the Kiangsu product is supplied to mills in other parts of the country, though a considerable amount is exported to Hong Kong, India and the Straits Settlements. Cotton mills in Wusih, Changchow, and Nantung sell their yarn to Kuangsi, Kuangtung, and North China in addition to meeting local needs.

MARKETS FOR KIANGSU COTTON YARN

	Annual Consumption piculs
Kuangtung	444,196
Sezchuen	288,076
Tientsin	160,697
Hankow	298,527
Changsha	—
Swatow and Amoy	197,248
Kiukiang	165,608
Newchwang and Chinwangtao	102,871
Tsingtao	7,709
Ningpo	24,672
Yunnan	—
Shanghai (approx.)	460,000

Despite the fact that in recent years the price of silver has been falling, while wages are much higher now than formerly, the price of cotton yarn does not tend to go up. Cotton is a world commodity, and its price is determined by the world market.

PRICES OF COTTON YARN IN SHANGHAI.

(Man and Bell 16-count as standard)

	Forward Price High	Forward Price Low	Average Delivery Prices of the Year	Spot Prices
	Tls.	Tls.	Tls.	Tls.
1922	146·00	134·10	—	—
1923	170·72	147·50	154·96	—
1924	175·00	158·90	167·50	—
1925	170·20	158·40	163·83	—
1926	153·11	134·40	140·10	134·31
1927	144·26	131·90	139·63	128·31
1928	163·10	153·70	157·74	176·30
1929	169·40	159·00	162·88	161·38
1930	157·80	148·80	153·30	95·13
1931	—	—	—	170·23

THE KNITTING INDUSTRY IN SHANGHAI AND TIENTSIN.

SHANGHAI

There are about 300 knitting factories in Shanghai, ranging from large concerns each with 800 operatives and over 200 power-driven machines, to small factories, each with three or four hand looms and about half a dozen operatives. As the cotton yarn and thread produced by Chinese mills in Shanghai does not, for the most part, exceed 22's counts, hosiery factories in Shanghai depend on foreign mills for cotton yarn of 80's to 120's counts. Many large mills have their own sales departments in the business section of Shanghai for handling retail as well as wholesale business, while the small factories sell their goods on the premises.

The operatives employed in knitting mills in Shanghai number more than 10,000, two thirds of the total being female workers. The processes are generally divided into knitting, reeling, packing, dyeing and drying, the first two being performed by female workers, and the last three by men. Most operatives are paid according to piece work rates on the fifteenth and at the end of each month, but workers in some mills receive fixed monthly wages, and are provided with board and lodging. The scale of wages observed in six well-known factories in Shanghai is as follows (calculated in Mexican dollars) :—

	Maximum	Average	Minimum
Nan Chang	$24	$16 to 20	$8
San Lien	35	15 to 22	10
Chin Pu	14	10	6
Kung Li	26	12 to 20	8
Jen Yuan	50	15 to 20	8
Pioneer Knitting Mill	45	20	16

Operatives work in two shifts, 10 hours for the day shift and eight hours for the night shift, though some factories work in two shifts of 11 hours each.

TIENTSIN

According to an investigation by the School of Economics of the Nankai University in 1929, there were 154 knitting factories in Tientsin with 1,610 regular workers and apprentices, consuming raw materials worth $963,674. Since then the industry has been growing, many new establishments having been opened up.

Cotton yarn is the most important raw material used in knitting. About 41 per cent. of the factories in Tientsin use this material alone, more than 40 per cent. use cotton yarn and woollen thread, while mills consuming cotton yarn, woollen thread, and artificial silk form 9.10 per cent. of the total. Those engaged in cotton and artificial-silk knitting represent only 4.55 per cent. of the whole, and those using woollen thread solely, number 4.28 per cent.

With the exception of the cotton yarns produced by Chinese mills, the remaining raw materials are imported, woollen and cotton yarn from England and Japan, and dyes from Germany and the United States.

(*Chinese Economic Journal*.)

COTTON WAGES IN CHINA.

We wish to point out that the list of wages paid to cotton mill operatives appearing on p 134 of our last issue is given in MEXICAN dollars, and not American dollars A Mexican dollar is only worth approximately 20-21 American cents

The Textile Industry in Soviet Russia.

THE present main groupings of the textile industry in the Soviet Union are in Ivanovo-Voznesensk (the "Manchester of Russia"), the Moscow district and Leningrad district

Ivanovo-Voznesensk has some eighty principal establishments, Moscow about forty—exclusive of vicuna and colour-print works—and Leningrad above a score

In addition, there exist spinning, weaving, dyeing and finishing mills in various other parts of the Soviet Union Silk mills are growing in number in Central Asia, as silkworm cultivation becomes rationalized and extended

In a country of constantly expanding industry, however, it is difficult to speak with authority of definite areas given over to any specific branch of the industry For, while it is incontestable that Ivanovo-Voznesensk, Moscow and Leningrad—the old pre-revolutionary textile centres—will for some years to come remain important textile towns, there is but little reason to doubt that eventually they may be overtaken, and even surpassed in magnitude and in modernity, by Central Asia

For it is in Central Asia that cotton is grown, and the textile industry of the U S S R is coming more and more to plan its own cotton production This enables the spinning and manufacturing side of the industry to be located within reasonable distance of the area of the raw material

PROGRESS IN CENTRAL ASIA

For this reason, greater attention is being paid to Central Asia, and, within the next five years, 30 per cent of the new textile mills to be erected will be built there The plan includes extensive development of silk, cotton, wool, jute and other fibre cultivation

Three factors influence the growth of the textile industry in the Soviet Union raw materials, transportation and labour The productivity of mills may be retarded by lack of materials—and this lack of materials may be owing to an overtaxed transportation system which still needs considerable additional construction to bring it up to the expanding needs of the new economic life of the country And, again, there is a crying need for skilled and semi-skilled labour for certain functions within the industry. There is no inexhaustible well of this labour, it must be trained, and the task of adapting peasants—fresh from the villages and unused to mechanical processes—to the new work is no light one

Despite these obstacles, however, the textile industry of the Soviet Union evidences a continuous upward movement in production, and many new enterprises are being constructed

Taking into account the various branches—cotton, wool, felt, knitted goods, silk, flax, jute, etc —the production of the textile industry for 1932 is equivalent to 4,860 million roubles The 1932 plan calls for the following production cotton goods, 3,061 million metres, woollen goods, 133 million metres, flax goods, 181 million square metres, silks, 27,900,000 metres, 39,600,000 lbs of cord, jute sacks, 55 million pieces Made up goods are to attain a value of 2,221 million roubles, and knitted goods 553,700,000 roubles

REVISED PRODUCTION ESTIMATES

Let us now look back and compare this plan of production with that of a couple of years ago

In an important article by the Assistant Commissar of Light Industry, M Yeremin—an authority on the textile industry—a comparison is made between cotton production in 1930 and 1932, reckoning the amount of goods per head of the population

In cotton goods, then, in 1930, there were 14 metres per person in the U S S R In 1932 this figure has already risen to 18 5 metres

It must be remembered that the objective of the Soviet textile industry is to make it entirely self supporting as regards raw materials This being the case, it will be realized that the progress in the spinning and manufacturing sections must be based upon the development in the cultivation of primary materials In this respect, 1932 is a decisive year The process of collectivization in agriculture has now been brought to a stage when the planned production of raw material, by State and collective farms, becomes possible Large areas devoted to cotton, flax, etc , have now become collectivized, thus rendering possible the use of chemical soil cultivation and of mechanized harvesting

For the entire year of 1932, the estimated increases in production over 1931 are as follows For the whole textile industry, 24 per cent The cotton harvest for 1931 was 24 per cent in excess of 1930, which has permitted the planned extension of cotton goods production in 1932 by 24 1 per cent over 1931 This instance excellently illustrates the intimate relationship between raw material production and manufacturing It must be remembered that cotton imports into the U S S R , which totalled 102,600,000 roubles in 1926-1927, have now entirely ceased

OLD AND NEW FACTORIES

The equipment of the Soviet textile industry varies greatly In the older textile centres there are a number of enterprises where the machinery is old-fashioned and in need of replacement There is a great lack of spare parts While many parts for looms can be supplied by the small artisan workshops, these cannot handle the more complex yarn machinery. In the Ivanovo-Voznesensk, Moscow and Leningrad areas, a great deal of the machinery is British. It is obviously advantageous to replace worn machinery and parts by their British equivalent and, provided the proper credit facilities are forthcoming, the Soviet textile industry would undoubtedly prefer to purchase its replacement machinery in Britain rather than elsewhere.

But while there are some obsolete factories, there are also a number of recently constructed ones which are as near technical perfection as possible, and these are becoming more numerous. Among these may be cited the 'Melange' group at Ivanovo-Voznesensk, the Dzerzhinsky, Krasnaya Talka and Lakin spinning mills and various new spinning and weaving mills at Fergan (Central Asia), at Ashkhabad, Leninakan and in Azerbadjan. In other cases, old-established factories have been entirely reconstructed and re-equipped, as, for instance, the linen mills in White Russia and at Ivanovo-Voznesensk. At the present time, a large-scale process of re-equipment and modernization is under way. Automatic looms of the newest type are replacing the old machine looms. And, in Central Asia, the latest methods of ginning are replacing the more primitive processes of yesterday. The production of artificial silk is being seriously inaugurated this year, and much interest is devoted to the problem of the production of creaseless rayon.

The Industry under the Second Plan

Finally, a word as to the future. The growth in the production of raw materials, increased railway facilities, and modernization of factory equipment should render possible a vast extension of production, at an accelerated rate of advance, during the second Five Year Plan. Estimates for the second Five Year Plan, ending in 1937, include the following: Cotton goods output is to increase from 3,061,500,000 metres in 1932 to 6,500,000,000 in 1937, or an increase of 212.3 per cent. The end-of-1932 production of woollen goods—103 million metres—is to be exactly three times that amount in 1937. Linen production is to attain 4.75 times its present extent, of which 500 million metres will be reserved for individual consumption, and the rest for industrial purposes. In knitted goods, increases from 1932 to 1937 are as follow: stockings from 101 million pairs to 350 million, socks from 60 million pairs to 150 million, children's hosiery from 40 million pairs to 200 million, underwear from 29 million metres to 300 million metres, over a tenfold increase. Various measures are outlined for increasing the area under cotton, to develop sheep-breeding, securing of special quality wools, merinos, etc.

Special attention is to be paid to Central Asia during the second Five Year Plan. New mills, with a total capacity of 685,000 spindles for cotton goods, and of 205,000 spindles for knitted goods, are to be constructed in Central Asia alone. The construction of mills with 160,000 spindles will be carried over into 1938 for completion. There are only 31,000 spindles in Central Asia at present.

The cocoon crop for 1937 is estimated at about 31,000 tons

Central Asiatic silk production will be raised from 600 tons this year to 3,000 in 1937.

The nation-wide organization of the textile industry of the Soviet Union, the possibility of planned co-ordination in all its branches and parts, guarantee a measured and rapid advance which, within a few years, should make of the U.S.S.R. one of the greatest textile-producing countries in the world. Its vast population, the majority of which for years lived under the former regime without the possibility of satisfying even their most elementary needs, are now demanding products in ever-increasing number, as the cultural level and the well-being of the masses rises. For the Soviet textile industry there exists a vast home market, to the expansion of which one can foresee no limits for very many years to come.

(*Monthly Review of the Moscow Narodny Bank, London.*)

SOVIET RUSSIA.

According to a United States Consular report from Berlin, on November 29, the quality of the Soviet textiles leaves much to be desired. It is reported that of the 2,161,000,000 metres (metre = 1.094 yards) of cotton goods produced in 1930, over 400,000,000 metres were unfit for use. In the textile-producing area, the Ivanowski Province, the percentage of such spoiled goods ranged between 18 and 32; the quality of all cotton goods marked "below standard" amounted in some cases to as much as 70 per cent.

The results of the Soviet Five-Year Plan, as far as the textile industry is concerned, seem to have been fairly successful. Notwithstanding the efforts to increase the production of cotton goods, the output in 1931, however, was reported as smaller than in the preceding years:—

	Cotton Goods in Million Metres
1913	1,625
1930 completed	2,454
1931 planned	2,820
1931 completed	2,390
1932 planned	3,061
1932 completed	2,246

Of the 1932 production the "Izvestia" states that 428,000,000 metres, or 20% were defective

HUNGARY.

Arrangement to Purchase American Cotton.

An arrangement is reported to have been worked out which is expected to facilitate the procuring of American cotton for the cotton mills during the period of foreign exchange control, according to the local press. It is reported that a company has been formed which will purchase cotton, mostly American, which is to be paid for by the exchange secured through the sale of Hungarian products in Great Britain, the latter to be likewise handled by the same concern. It is said that two shipments of 1,000 bales each purchased through London are already *en route* to Hungary, and it is believed that other shipments will follow. The above arrangement will enable Hungarian mills to use more American cotton, although it is said that they will have to pay a premium over world prices.

Since the introduction of foreign exchange control the mills were allotted the necessary exchange only when available, and regular purchases of cotton became, at times, difficult. The mills therefore received their supplies on a hand-to-mouth basis, and a number of mills were on the verge of closing down owing to the shortage of raw material. The purchase of about 15,000 bales of cotton from the Egyptian Government on two-year credit last spring relieved the situation to a certain extent. It is believed that the condition of the mills in this respect will be further alleviated by the above arrangement.

INDIA AND FINE GOODS PRODUCTION.

During the last three years the trend of piece goods production in Ahmedabad has been toward production of finer cotton goods. While there was a relatively slight change in the production of coarser fabrics the increase in the production of finer cotton fabrics has been considerable. For example, the production of shirtings and long cloth increased from 139,000,000 yards in 1929-30 to 170,000,000 yards in 1930-31 and 171,000,000 yards in 1931-32, and the production of lawns and cambrics increased from 1,307,000 yards in 1929-30 to 12,615,000 yards in 1930-31 and 22,272,000 yards in 1931-32. In the production of these goods a larger proportion of American cotton is used than for the other goods.

POLAND.

The Lodz Chamber of Commerce has rejected the proposal that imports of cotton into Poland should be centralized through a Government-controlled cotton import bureau, according to the Polish press. It is said that the leading cotton manufacturers do not believe that the proposed scheme is practicable

The project for a cotton " compensation " trade with the Soviet Union was likewise considered impracticable by the leading Lodz cotton manufacturers, owing to the fact that the Soviet Union demands cash for its cotton and long-term credit for the goods to be purchased from Poland.

The above scheme resulted from a study of the so-called " compensation " trade, that is, the restriction of imports as far as possible to countries which accept a corresponding amount of exports from Poland. *(U. S. D. C.)*

ESTHONIAN IMPORT DUTY ON RAW COTTON.

Effective October 3, 1932, the Esthonian Government has imposed a minimum duty (applying to U.S. goods) of 0.10 Esthonian crown per kilo net (about 1.2 cents per lb. at current exchange) on raw cotton and cotton waste. Formerly cotton and cotton waste were admitted free of duty. The duty on goods from countries with which Esthonia has no treaty is fixed at 0.20 Esthonian crown per kilo.

During the calendar year 1931 Esthonia imported 14,361 bales of cotton, of which 10,000 bales came from the United States. In the first eight months of the current year 10,859 bales were imported, compared with 9,926 bales for the corresponding eight months of 1931. It is believed by local manufacturers that the cotton mills are supplied with raw material for the immediate future owing to the increased shipments shortly before the import tariff became effective. *(U. S. D. C.)*

JAPAN.

According to the report of the Japan Cotton Spinners' Association, the business results of spinning mills belonging to the Association for the first half of this year are as follows:—

	Jan – June, 1932	Increased from preceding 6 months by
Number of companies	62	2
	Yen.	Yen.
Capital	531,014,000	24,650,000
Paid capital	386,103,000	7,547,000
Reserve funds	237,084,000	1,702,000
Debenture and loans	125,828,000	11,059,000
Fixed assets	570,378,000	6,997,000
Depreciation, this term	12,081,000	1,553,000
Profit brought forward	22,085,000	decr 8,394,000
Profit, net this term	23,543,000	737,000
Dividends	38,125,000	261,000
Reserve, this term	3,006,000	85,000
Profit carried forward	44,497,000	decr. 8,003,000
Dividends, percentage p.a	9·6	0·2

The increase of capital was caused by 17,000,000 yen increase of capital made by Naigai-Men Company, new establishment of Kureha Spinning Company (10,000,000 yen) and Tokushima Spinning Company (2,500,000 yen). Number of companies paying no dividends this term is 20, or 3 less than last term.

Bombay Millowners' Annual Statement.

THE Millowners' Association, Bombay, have issued their usual annual mill statement for the year ending August 31, 1932, containing the names of cotton spinning and weaving mills, working or projected, in British India and Native States, as also the names of agents or owners, particulars of share capital, numbers of looms and spindles—erected and working—in each equipped mill, quantity of cotton consumed in candies, average number of hands employed daily, and the average number of days worked by each mill during the year. In addition, the statement contains statistical summaries showing the growth of the cotton mill industry in the whole of India, in Bombay City and Island, Ahmedabad and the Bombay Presidency (excluding Bombay City) since the year 1891. The statement is divided into three parts. Part I contains detailed particulars of the equipped mills in Bombay City and Island, and such particulars as are available of the mills projected or in course of erection, during the year. Part II contains particulars of equipped mills in Ahmedabad and that portion of the Bombay Presidency outside the cities of Bombay and Ahmedabad. Part III contains particulars of equipped mills situated in other presidencies.

FEATURES OF THIS YEAR'S STATEMENT.

One of the most striking features of this year's statement is the substantial increase in the number of projected mills in the Bengal Presidency. There are 20 mills in this portion of the statement as compared with four last year. At the same time it should be pointed out that, judging from previous experience, it would be unusual to expect that all these mills will actually work in the near future, for example, only one of the four mills shown in this portion of the list against Bengal in last year's statement has been transferred to the list of working mills this year. In the Bombay Presidency, the number of mills in course of erection is considerably less —8 against 15 last year. The reduction is due to the inclusion of four mills which were in course of erection last year in the list of working mills this year. In other parts of India there has been very little change in the number of mills projected or in course of erection. Of the 340 equipped mills in the whole of India, 317 worked either the whole or a portion of the year, and 23 were completely idle. Of these idle mills, nine were located in Bombay City and Island, two in Ahmedabad, six in other parts of Bombay Presidency, and six outside Bombay Presidency.

CAPITAL.

The total paid-up capital of the industry was Rs.40.32 crores, as compared with 40.20 crores last year. This total includes the paid-up capital of a number of mills which have been entirely closed down for some reason or other and a number of mills which are at present in process of liquidation, but it does not include the capital of mills projected or in course of erection, or the capital of 43 mills which submitted no figures as to their share capital

Total Number of Spindles and Looms

During the year the number of spindles in the equipped mills in India increased by about 2 lakhs, and the number of looms increased by about 4,000 In Bombay City and Island the increase in spindleage and loomage was negligible In Ahmedabad there was an increase during the period of about 90,000 spindles and 2,500 looms, and in the rest of the Bombay Presidency there was an increase of 50,000 spindles and 600 looms In the Bengal Presidency there was an increase of 7,000 spindles and 400 looms, and in other parts of the country the increase in spindleage and loomage was relatively small

Spindles and Loom Activity

The total number of spindles in the 340 equipped mills in India amounted to 9½ millions, of which on the average 8 3 millions were working daily The total number of looms in the country amounted to 186,000, of which on the average about 161,000 were working daily In Bombay City and Island (excluding figures relating to night shift) spindle and loom activity during the year was relatively poor Of the 3 4 million spindles erected, only just over 2 7 millions were working daily, of the 77,000 looms erected, an average of only 62,000 worked daily In Ahmedabad spindle and loom activity was proportionately greater than in Bombay Out of 1 8 million spindles erected, 1 7 millions worked daily, and out of 43,000 looms erected, nearly 40,000 worked daily

Consumption of Cotton

Despite an increase in the average count of yarn spun in Indian mills during the year, mills consumed nearly 300,000 bales of cotton more than last year Consumption of cotton during the year amounted to 2 91 million bales (of 392 lbs each) This figure easily constitutes a record

Average Number of Hands

The average number of workpeople employed daily in the cotton mills of the country during the year amounted to 400,000, which figure is exclusive of the number employed during night shift

The statement is printed on paper and on cloth, the price of the former being Rs 3 and of the latter Rs 4 (post paid), and is available for sale at the office of the Millowners' Association, Bombay, Patel House, Churchgate Street, Fort, Bombay

MISCELLANEOUS

The Allotment Plan—U.S. Views.

(Several of the following articles were received too late to be inserted under American Section)

Mr C T Revere, of Munds, Winslow & Potter, New York, expresses himself very strongly against the Allotment Plan in a market letter written last December We extract the following from his article —

The farmer is not being confronted by an emergency In most cases he has the shelter of his home, if foreclosures are withheld and the tax collector stays his hand He has enough to eat, for these late years of adversity have taught him the necessity of providing for subsistence

If it were not for tax sales and foreclosures, the average farmer would not be worrying as much over this depression as his brother in the towns and cities When it comes to the solution of his major problem, the saving of his farm, the preservation of his home, this latest House bill does not offer a flea bite of relief

Yet, in order to placate the bogy of agrarian discontent, to satisfy the clamour of the professional farm agitator, it is proposed by this new legislative miracle to levy a tax on the processing of various farm products that will run up into a total estimated all the way from a little over $900,000,000 to approximately $1,150,000,000 This tax is to be invoked in the holy name of "parity between agriculture and other industries '

Without doubt, there would be an excuse for this undertaking, high-handed as it may be, if these "other industries" were in a flourishing condition and thus able to bear this colossal impost In a foregoing paragraph it was pointed out that farm gross income had dropped more than 6½ billions from 1929 to the end of 1932 It is regrettable that we have no complete comparisons for industry, but the record for 1929 to 1931, inclusive, gives a fair picture of certain economic changes In 1929, according to the Census Bureau, factory output was $70,434,000,000 By the end of 1931 it had dropped to $41,333,000,000, a decline of 41 3 per cent within two years Those who have watched business and industrial developments in 1932 may draw their own conclusions as to the extent of the further progressive decline

In the figures set forth in the preceding paragraph, we have an explanation for the decline in the American industrial pay envelope and the mounting figures of unemployment Yet, these are the groups, with a decline of billions in production, billions and billions in wages, that are to pay the "adjustment charges" to correct the "inequalities between the prices for agricultural and other commodities"

There is nothing chronic—at least let us hope—in the position of American industry The catastrophe indicated above has descended suddenly—a matter of two years The chief sufferers are the industrial masses Every public-spirited citizen in America has recognized the grave character of this emergency, and relief contributions from every source have come in a stream running into hundreds of millions Here, indeed, we have an emergency, calling for food, clothing, shelter, the barest necessities of life In a large majority of cases, the victims of this tragic condition are not worrying about taxes or mortgages Their concern is for food, for shoes, clothing, and their prayer is for mercy on the part of the landlord

Verily, Congress moves in a mysterious way, its wonders to perform All of us remember the pious ferocity with which it rejected a manufacturers' sales tax at a minimum rate Of course, it should be kept in mind that the chief beneficiary of this sales tax would have been the *nation*, a vague entity over which Congress never seems particularly concerned Nevertheless, the sales tax would have balanced the budget, and our national credit would have been placed above suspicion Here, however, we have another sales tax, not 2¼ per cent , but one that climbs into imposing percentages, with its incidence falling most heavily upon those least able to bear it Its sole attraction to Congress is that it may still the clamour coming from the salaried farm agitators

In the case of cotton, we have a sales tax running from 15 per cent to 60 per cent These figures are based on the assumption that the processing tax will not be more than five cents per pound, although there have been some reports to the effect that the tax may be as high as nine cents

However, according to the Cotton Textile Institute, the increase in the price of standard print cloths will approximate 37½ per cent , narrow sheetings will be increased 50 per cent , low count yarns, used largely in hosiery and underwear, call for an increase of 40 per cent to 60 per cent , for denims, used largely in work clothing, particularly overalls, an increase of 38 per cent , chambrays, used for work clothing and low priced children's garments, 32 per cent On the other hand fine yarn goods, such as voiles, lawns, etc , will show an increase ranging only from 15 per cent to 25 per cent

Before giving further consideration to the effect of this legislation on the domestic textile industry, it might be just as well to examine the alleged benefits to agriculture Assuming a fairly satisfactory acreage reduction, and a crop of 12,500,000 bales, and assuming a domestic consumption, or processing, of 5,000,000 bales, the plan would work out about as follows On the 5,000,000 bales of domestic manufacture, the fund on the "adjustment charge" basis of 5 cents per pound would produce about $125,000,000 After deducting administrative charges of 2½ per cent , there would remain for distribution among the cotton producers something less than $120,000,000, or a little less than two cents per pound, or ten dollars per bale, on a crop of 12½ million bales

The above picture grants the plan 100 per cent of its ideal of perfect workability It makes no deduction for refusal to come in under the agreement It assumes that domestic consumption will not be materially curtailed by the imposition of the tax It assumes that the vast army of experts, economists, investigators, mathematicians, auditors, checkers, and snoopers, to say nothing of the most stupendous bookkeeping operation in any human undertaking, will cost no more than 2½ per cent. of $125,000,000! In reality, no one would underwrite the cost of the job for five times that amount, but again it is assumed that this cost will be met by appropriations from another source.

However, there is no assurance that the cotton producer will benefit to the extent of this approximate two cents per pound. In theory it would mean that with cotton at seven cents per pound, the producer would get an additional two cents, giving him a total of nine cents.

But the unpleasant possibility that seems to have escaped the discerning eye of our legislators who are seeking to improve upon the workings of economic law is that one consequence of this measure will be a decline in the basic price that will more than offset the proceeds from the "adjustment charge."

Various things may happen, and certain things are bound to happen. Among the possibilities is the chance that those growers who do not care to come in under this plan, and scenting the likelihood of higher prices, may plant freely, and their number and output may be large enough to increase, instead of reduce, total production. Moreover, climatic conditions and intensive cultivation have a good deal more to do with increasing cotton output than the mere area under cultivation.

These are some of the possibilities, amounting, according to experience, to probabilities. However, we have certain elements of a factual character to face. In the last four years we have seen our surplus of raw materials pile up not so much through increased production as through under-consumption. If anyone believes that consuming groups, suffering from flattened pay envelopes, menaced daily by the threat of losing their jobs, in many cases facing eviction by importunate landlords, are going to pay a sales tax of 15 per cent. to 50 per cent. on cotton goods without resorting to a genuine buyers' strike, he should put on a pink sun-bonnet and apply for a job in the movies as a reincarnation of Pollyanna.

The cumulative effect upon the American textile industry would be devastating. It would be impossible to hold our export trade, in spite of the claptrap offering of a rebate of the tax on goods designed for export. The cost of doing export business would be enormously increased, as the tax would have to be advanced to the extent of millions of dollars pending export transactions, and even more, the collection of rebates from Uncle Sam, notoriously slow in pay.

The cotton manufacturer would have to advance the tax to the extent of millions if he is to operate freely, and if he does not operate in normal fashion this means a disconcerting slowing down in the American textile industry. No one can foretell what would be the effect of a buyers' strike. We saw it come in the heyday of post-war prosperity, and it was one of the precipitating causes of the deflation of 1920. Including waste, a five-cent. tax would mean that the American consumer would be mulcted six cents and would pay out three dollars per bale for every dollar per bale received by the Southern cotton grower, even if the fund produced by the ' adjustment charge should be honestly and efficiently administered

With creeping paralysis descending upon our textile export trade, and the hostility with which the buying public will greet this clumsy bid for the political support of agriculture, we regard a decline in domestic consumption of cotton goods to the basis of 4,000,000 bales as a distinct probability It is easy to envisage the consequence of such a catastrophe It means widespread bankruptcy throughout our textile industry and an appalling increase in unemployment It is indeed a tragic coincidence that this proposed benefaction for the cotton grower is so framed and so devised that it could easily administer the *coup de grâce* to the one industry that has stood up throughout this entire depression with a fairly well maintained output and employment roster Iron and steel, and their products, in 1929 employed over 880 000 operatives in 1931 the number had shrunk to 508,000 Textile comparisons are 1,707,000 in 1929 against 1,406,000 in 1931 Textiles rank first among all our industries in the average number of wage earners

A domestic consumption of 4 000,000 bales of cotton also would mean a further exodus from Southern mills back to the cotton farms With a domestic consumption of 4,000,000 bales, and with demand dependent to an extraordinary extent on sales for export, a basic price—ex-tax—of four cents, or even less is a development that would have to be seriously contemplated

One of the most preposterous claims made for this weird legislative exhibit is naively set forth by the cloistered scholar credited with initiating the scheme ' No new Government appropriation is required, and there is no additional expense to the Treasury Shades of Adam Smith ! Reduced to simple fundamentals, when was the Treasury or the Government, for that matter, put to any " additional expense ' ? The Farm Board, with its half billion, did not cost the Government a nickel What difference does it make whether we get the money from the taxpayer and put it into the Treasury, or sting the taxpayer and put the extortion into a special fund to be disbursed at political behest ?

The malignant ramifications of the proposed measure are endless If we are to save our home textile market from capture by foreign manufacturers who pay no ' adjustment charge, ' we must raise our import duties to unconscionable heights, thus provoking more tariff irritations and adding still further to world trade strangulation and prolonging world depression In considering the effect of purchasing resistance to an artificial rise in prices, we must bear in mind always that of the three groups, the buyer, the manufacturer, and the cotton farmer, the buyer is in the strongest position His present impoverished condition gives added power to his price opposition The manufacturer will suffer but he can wait on buying moods The farmer will be the real victim

It is our firm conviction that this projected legislation, with its blazoned flaunt of basic unsoundness, with the destructive psychology and loss of confidence thus engendered, will precipitate a decline in world prices that will effectually offset any increase in domestic prices In the end, it will leave the American taxpayer once more to foot the bill for political folly

A rise in world prices is the only cure. It must come through a series of favourable reciprocal repercussions proceeding out of an assertive confidence. This confidence must receive its impulse from constructive action on fundamental problems, along with the removal of fears regarding further appeal to nostrums. In this way only can the world resume its triumphant march around the benevolent circle—industry reviving and taking more of agriculture's products, at higher prices, and agriculture buying more of industry's output, with prices moving upward. Prosperity comes through the increasing ability of one group to buy the products of another group, and progress in this direction only will be impeded by resorting to " boot-strap economics."

A well-informed correspondent, in writing from New York on the Allotment Plan, on January 9, states:—

" The Farm Relief Bill is meeting considerable opposition. Reports reaching here from Washington, however, suggest that it is likely to pass the House. Greater opposition is expected in the Senate, and the fate of the Bill is considered uncertain. It is being pointed out by experienced Washington correspondents, however, that even if it should pass both branches of Congress, the majorities in favour would be insufficient to over-ride a veto, should the Bill prove unacceptable to President Hoover.

I hear the opinion expressed by some conservative people in the trade here that the Bill is not likely to be enacted during the present administration, and that the question of farm relief is likely to come up again in a special session of the new Congress next spring, assuming, as now seems likely, that a special session is called by the incoming administration."

The following is extracted from *Pearsall's News Agency*:—

" The ' fair-exchange value ' fixed for wheat in the Committee amendment is 75 cents a bushel; for cotton 9 cents a pound, and for hogs 5 cents a pound, these values to apply during the ' initial marketing period,' which is to extend from 30 days after approval of the Act until the opening of the 1933-34 marketing season for the respective commodities."

ADDITIONAL RED CROSS COTTON.

The U.S. Senate passed another Bill early in January, granting an additional 350,000 bales of cotton to the Red Cross.

This cotton is all from the Stabilization Corporation, and the total cotton handed over to the Red Cross Society now amounts to 850,000 bales, and has been, or will be, exchanged for goods and garments for distribution to the needy. *The Journal of Commerce* states that the passage of the last Bill will probably mean some more hedge selling, since a good portion of the previous donations has been coming back on the cotton futures market in the form of hedges, as co-operative and other organizations have taken it in.

China—Second Cotton Estimate.

The Chinese Cotton Statistics Association, Shanghai, published on December 15 its second estimate of the cotton crop in China, as follows:—

Area	37,079,835 mow
Production	8,094,863 piculs

The above figures, which are based on the condition prevailing previous to December 10, 1932, include the returns received from the following eleven provinces, no returns being available from the province of Liaoning:—

	Second Estimate 1932		Final Estimate 1931	
	Area mow	Yield piculs	Area mow	Output piculs
Liaoning .. .	—	—	1,142,430	177,680
Hopeh	5,082,100	1,283,197	2,953,000	814,000
Shantung . ..	6,844,166	1,769,354	7,974,094	2,154,882
Shansi .. .	303,450	54,128	348,877	81,728
Honan . ..	3,482,160	599,013	2,880,410	644,544
Shensi . ..	1,449,864	157,884	1,638,800	346,319
Hupeh	7,627,250	1,634,350	4,284,260	1,037,002
Hunan	982,685	199,764	266,450	45,292
Kiangsu	8,495,107	1,769,860	46,127	8,920
Kiangsi	222,688	45,822	462,900	43,050
Anhwei	918,500	164,327	7,656,244	626,480
Chekiang ..	1,671,775	417,164	1,984,187	389,883
Total	37,079,835	8,094,863	31,637,779	6,399,780

Compared with the first estimate, published on August 20, 1932, the second estimate shows a decrease in area by 6,490 mow, and also a decrease in production by 2,734,299 piculs. Since the first report was published the weather has been unfavourable for cotton-growing, the northern provinces having suffered from excessive rains and early frost while the southern provinces complain of shedding owing to the scarcity of rain.

This year's cotton yield per mow is below the average for the last five years, for which the figures of area and yield are given below:—

	Area mow	Yield piculs
1927	27,610,276	6,722,108
1928	31,926,311	8,839,274
1929	33,811,255	7,587,021
1930	37,593,012	8,809,567
1931	31,637,779	6,399,780

COTTON HARVESTING MACHINES.

A total of 361 cotton-harvesting machines, 330 of which were mechanical pickers, helped to harvest this year's crop in 14 South Plains counties of North-west Texas. This method of harvesting does not lower the quality, since most gins in the territory are equipped with cleaning apparatus. But the important thing about the mechanical method is the substantial saving effected in harvesting, the *Dallas News* claiming that some of these machines show a saving of $4 to $6 a bale over hand-gathering methods.

U.S. NATIONAL COTTON WEEK.

The week of May 15 to 20, 1933, has been designated for the third annual observance of National Cotton Week, according to a recent announcement by Mr. George A. Sloan, President of the Cotton Textile Institute. This date was selected after expressions came from a number of representative retailers in various parts of the country, that the middle of May had proved to be not only well timed for the event, but also offered no end-of-month inventory complications.

The success of previous observances has won an established place on the trade calendar for National Cotton Week as a definite factor in stimulating spring and summer business. More than 25,000 department stores and other retail establishments participated in the 1932 observance, and merchants reported that the impetus gained therefrom continued to be reflected in the sales volume of cotton goods departments throughout the summer season.

U.S.A.—STATE OF TRADE.

The following production statistics have been received from *The Association of Cotton Textile Merchants of New York*:—

PRODUCTION STATISTICS, DECEMBER, 1932.

The following statistics cover upwards of 300 classifications or constructions of carded cotton cloths, and represent the major portion of the production of these fabrics in the United States. This report represents yardage reported to our Association and the Cotton Textile Institute, Inc. It is a consolidation of the same 23 groups covered by our reports since October, 1927. The figures for the month of December cover a period of five weeks:—

	December, 1932 (5 weeks)
Production was	292,359,000 yards
Sales were	321,314,000 yards
Ratio of sales to production	109.9 per cent
Billings were	277,943,000 yards
Ratio of billings to production	95.1 per cent
Stocks on hand December 1 were	200,144,000 yards
Stocks on hand December 31 were	214,560,000 yards
Change in stocks	Increase 7.2 per cent
Unfilled orders December 1 were	336,544,000 yards
Unfilled orders December 31 were	379,915,000 yards
Change in unfilled orders	Increase 12.9 per cent

For the calendar year of 1932 sales totalling 2,887,190,000 yards were 104.8 per cent of production, which amounted to

2,753,626,000 yards. Billings were 2,829,314,000 yards, or 102.7 per cent. of production.

Stocks were reduced 75,688,000 yards, or 26.1 per cent., during the year to the lowest end-of-year supply on record. Unfilled orders increased 18 per cent., or 57,876,000 yards, to the highest December figure since 1929.

AMERICAN GINNING REPORT TO JAN. 16, 1933.

According to the report issued by the Census Bureau, the amount of American cotton ginned up to January 16th was 12,418,000 bales.

The following table gives details of ginnings with comparisons:

	1933	1932	1931
Alabama	928,000	1,381,557	1,436,853
Arizona	60,000	89,874	138,495
Arkansas	1,254,000	1,635,893	858,970
California	120,000	156,844	233,197
Florida	15,000	43,191	51,014
Georgia	853,000	1,380,502	1,579,554
Louisiana	598,000	850,692	701,574
Mississippi	1,149,000	1,606,869	1,449,549
Missouri	290,000	249,628	152,025
New Mexico	64,000	86,383	93,965
N. Carolina	668,000	763,735	780,032
Oklahoma	1,050,000	1,198,933	851,613
S. Carolina	708,000	999,839	998,375
Tennessee	452,000	552,997	367,239
Texas	4,167,000	4,947,977	3,854,274
Virginia	30,000	41,814	41,598
Other States	12,000	9,754	6,061
Total	12,418,000	15,996,382	13,594,388

If this table is compared with the crop estimate published on page 206 of this issue, it will be seen that already a greater number of bales have been ginned in Georgia, Missouri, North Carolina, South Carolina and Tennessee.

If the weight of the bales is also taken into account, a still larger number of states show a larger quantity of cotton produced than estimated in December.

MANCHESTER COTTON ASSOCIATION'S NEW PRESIDENT.

Mr. H. S. Butterworth, of the Ash Spinning Co. Ltd., Shaw, was recently elected President of the Manchester Cotton Association in succession to the late Mr. William Howarth, J.P. Mr. Butterworth is well known as an active participant in the activities of the Federation of Master Cotton Spinners' Associations Ltd.

AVERAGE WEIGHTS OF COTTON HANDLED IN U.S.A.

August 1st to close of December, 1932

	Number in bales	1932 Weight in pounds	Average weights	1931 Average weights
Texas	3,973,654	2,127,096,986	535·30	534·00
Louisiana	1,273,279	671,323,620	527·24	523·66
Alabama, etc.	242,041	126,526,933	522·75	516·37
Georgia	148,406	75,459,999	508·47	508·80
South Carolina	122,527	63,101,405	515	515
North Carolina	40,031	19,455,066	486	490
Virginia	39,398	19,699,000	500	500
Tennessee, etc.[*]	334,516	175,647,661	525·08	521·34
Total five months	6,173,852	3,278,310,670	531·00	529·24
Aug., Sept., Oct. and Nov.	5,000,951	2,658,216,369	531·54	529·14

[*] Average weights based on returns from Memphis and St. Louis. Memphis average 526·24 against 520·20 last year; St. Louis 510 against 510.

Obituary.

MR. JOHN SMETHURST, J.P.

The passing of Mr. John Smethurst, J.P., on December 15, removed from the industrial and commercial life of Lancashire one of her noblest and most respected sons.

From his earliest years he was possessed of an unbounded confidence and vitality which he infused into every movement with which he became associated.

The real secret of his success, however, lay in the fact that he was endowed with remarkable common sense, together with the facility to express himself lucidly on any subject connected with the cotton industry, to which he rendered loyal and distinguished service.

Armed with these essential qualities and supported by an affable demeanour, it was small wonder that after serving a short period as secretary of the Ashton Cotton Employers' Association he should be called upon to fill the highly responsible post of Secretary to the Federation of Master Cotton Spinners' Associations.

In this capacity, and subsequently as Deputy Chairman and Chairman of Committees, he laboured diligently in the interests of cotton employers, and the bigger the job the better he acquitted himself.

In wages and similar questions he was an outstanding personality in negotiations between the employers and operatives' leaders. His debating powers were exceptional, and it will ever remain a tribute to his memory that whilst he was admired by those whom he served, he was also respected by the workpeople's representatives who could always depend upon securing a square deal.

It gave rise to profound regret and a keen sense of loss when he finally decided to retire some few years ago, upon which he received the unusual honour of being elected a life member of the Federation.

It was due in large measure to the indefatigable endeavours of Mr. Smethurst that the International Federation of Master Cotton Spinners' and Manufacturers' Associations was formed. He was appointed its first Secretary at the inception of the organization at Zurich, in May, 1904. He felt that such a world-wide movement could at least do something to realize from a commercial point of view the poet's dream: "The Parliament of man—the Federation of the World."

Mr. Smethurst added lustre to the International Cotton Committee, and in countless ways he assisted in building up an organization the beneficient influence and importance of which are recognized all over the world.

MR. HENRY ROBERTS, J.P.

During the past few months the English Cotton Industry has lost by death many of its prominent leaders. Yet another loss has to be recorded in the person of Mr. Henry Roberts, J.P., the President of the Ashton Cotton Employers' Association, who passed away on January 9, 1933, following a long illness at the early age of 52.

Mr. Roberts had in former years seen service in the cotton industry in Brazil. His practical knowledge, coupled with his wide experience, made him an exceedingly useful member of the Executive of the English Federation, whilst his services in connection with the Weaving Committee, of which he was chairman, were of inestimable value. He attended many International Cotton Congresses, and was highly respected by all who knew him.

MR. A. E. HAKANSON.

We regret to announce the passing of Mr. A. E. Håkanson in January, formerly member for Sweden on the International Cotton Committee, and President of the Svenska Bomullsfabrikantforeningen. Mr. Hakanson had been severely ill for a number of years, and retired last year from the International Cotton Committee. He will be chiefly remembered by members of the International Cotton Federation as President of the International Cotton Congress which was held in Stockholm in 1922.

COTTON TRADE STATISTICS

ENGLAND.

COTTON YARN EXPORTS TWELVE MONTHS ENDED DECEMBER 31

	1930 lbs.	1931 lbs.	1932 lbs.
Soviet Union (Russia)	189,500	88,200	1,000
Sweden	1,902,600	2,055,000	3,185,000
Norway	3,601,600	3,554,900	5,262,500
Denmark	1,538,900	1,914,500	2,327,400
Poland (including Dantzig)	1,430,200	1,122,300	1,632,100
Germany	33,408,100	32,861,000	29,077,700
Netherlands	28,631,400	23,497,300	18,188,200
Belgium	6,672,800	4,254,500	3,692,500
France	5,373,900	3,120,600	1,112,300
Switzerland	6,018,700	6,296,600	3,872,100
Italy	660,500	430,800	325,100
Austria	1,300,500	993,600	713,800
Czecho-Slovakia	2,348,100	2,168,200	1,421,300
Yugoslavia	2,364,300	2,558,900	1,643,500
Bulgaria	1,150,200	1,853,600	2,413,300
Roumania	5,858,200	6,312,100	11,422,100
Turkey	298,500	538,200	1,145,600
China (including Hong Kong)	2,120,100	7,649,500	10,341,600
U.S.A.	1,597,600	1,199,400	1,128,700
Brazil	1,868,800	2,211,200	1,406,100
Argentine Republic	1,873,200	2,164,100	3,545,800
British India :			
Bombay, via Karachi	380,700	302,700	323,400
„ other ports	4,354,200	3,104,700	3,468,400
„ Total	4,734,900	3,407,400	3,791,800
Madras	4,620,200	4,785,400	7,036,300
Bengal, Assam, Bihar and Orissa	1,959,400	2,608,000	2,965,000
Burma	644,800	497,500	843,300
Straits Settlements and Malay States	90,700	135,400	356,900
Australia	4,446,000	3,269,100	6,282,600
Canada	1,505,900	1,573,800	2,048,500
Other countries	8,777,900	10,395,200	14,480,600
Counts :			
Up to 40's	65,900,900	60,670,900	73,281,300
Over 40's up to 80's	50,679,400	52,095,500	51,661,000
Over 80's up to 120's	17,818,500	18,839,800	14,904,300
Over 120's	2,588,700	1,910,100	1,816,100
Grey, unbleached	123,333,500	121,964,800	124,570,200
Bleached and dyed	13,654,000	11,551,500	17,092,500
Total	136,987,500	133,516,300	141,662,700

COTTON CLOTH EXPORTS TWELVE MONTHS ENDED DECEMBER 31

	1930 sq. yds.	1931 sq yds	1932 sq yds.
Sweden	21,438,500	25,400,900	19,876,800
Norway	15,000,200	14,352,700	17,792,100
Denmark	26,722,800	28,516,300	34,791,100
Germany	43,709,300	31,381,300	28,069,500
Netherlands	38,340,400	28,137,000	35,062,500
Belgium	27,060,900	19,653,200	11,960,500
France	7,517,900	5,592,000	3,643,000
Switzerland	62,094,800	57,019,300	42,704,500
Portugal, Azores and Madeira	11,019,700	6,047,700	7,339,000
Spain and Canaries	5,536,600	2,625,100	3,175,400
Italy	7,250,300	3,764,800	2,049,000
Austria	6,735,400	6,332,900	4,979,100
Greece	26,347,000	29,048,400	19,002,700
Roumania	11,414,700	8,775,600	12,653,600
Turkey	29,734,400	35,527,200	25,781,100
Syria	14,714,100	14,727,300	7,136,200
Egypt	117,661,200	71,197,000	81,913,300
Morocco	38,878,500	49,004,200	52,784,800
Foreign West Africa	47,596,800	27,103,400	49,108,400
Foreign East Africa	9,515,400	6,240,800	8,778,700
Iraq	31,948,100	28,425,800	38,946,600
Persia	11,115,200	7,753,600	19,699,400
Dutch East Indies	70,414,700	39,019,200	43,868,300
Philippine Islands and Guam	6,527,800	4,412,000	5,094,500
Siam	10,985,200	8,377,100	9,459,400
China	41,985,200	41,553,400	72,597,800
Japan	7,399,600	5,902,400	4,200,200
U.S.A.	19,672,600	10,973,300	10,551,400
Cuba	8,876,500	4,118,100	5,222,400
Mexico	14,389,100	2,197,200	2,160,900
Central America	11,669,400	10,676,300	10,601,300
Colombia	21,532,700	31,376,800	38,489,400
Venezuela	21,174,100	16,448,600	20,741,200
Ecuador	5,536,200	4,582,000	3,262,800
Peru	9,202,200	5,144,200	7,122,600
Chile	31,660,800	8,498,100	2,748,900
Brazil	7,823,600	2,175,400	2,870,500
Uruguay	18,413,900	11,865,100	11,478,000
Bolivia	2,362,200	1,250,900	1,347,200
Argentine Republic	120,107,700	93,066,500	115,991,200
Irish Free State	25,795,900	25,712,700	28,050,200
British West Africa	116,590,500	81,109,600	159,546,600
British South Africa	57,251,700	55,383,700	51,993,100
British East Africa	14,568,400	10,621,500	13,272,300
British India :			
Bombay, via Karachi	182,601,800	167,647,100	224,863,600
„ other ports	135,386,400	63,759,900	115,066,800
„ Total	317,988,200	231,407,000	339,930,400
Madras	75,803,600	59,272,200	78,121,100
Bengal, Assam, Bihar and Orissa	345,331,500	77,021,300	129,501,100
Burma	38,956,200	22,222,700	51,332,700
Straits Settlements and Malay States	30,818,800	19,867,600	37,343,000
Ceylon	20,483,700	18,181,300	16,655,900
Hong Kong	19,387,100	39,287,200	52,866,800
Australia	129,331,800	122,011,700	166,532,300
New Zealand	29,890,500	27,506,400	40,557,600
Canada	32,423,100	27,781,100	27,237,800
British West India Islands and British Guiana	19,864,300	17,873,600	29,292,400
Other countries	91,195,700	72,837,100	80,747,300

COTTON CLOTH EXPORTS—*Continued*

	1930 sq. yds.	1931 sq. yds.	1932 sq. yds.
Grey, unbleached	580,608,200	301,926,700	366,569,500
Bleached	876,582,300	638,616,100	782,620,400
Printed	348,985,700	285,184,700	399,913,300
Dyed in the piece	506,840,700	413,446,500	541,123,400
Manufactured of dyed yarn	93,749,800	77,167,800	107,809,300
Total Square yards ..	2,406,766,700	1,716,341,800	2,198,035,900
Total Linear yards ..	2,490,549,400	1,790,233,800	2,302,612,500
Total cwts.			

TWELVE MONTHS ENDED DECEMBER 31

	linear yards	£
1913	7,075,252,000	97,775,855
1930	2,490,549,400	61,305,421
1931	1,790,233,800	37,327,672
1932	2,302,612,500	43,614,419

YARN AND CLOTH EXPORTS, VALUE IN QUANTITIES, 1913–1932

	Yarn		Cloth	
	lbs	£	Lin. yds.	£
1913 .	210,099,000	15,006,291	7,075,252,000	97,775,855
1914	178,527,800	11,973,956	5,735,854,700	79,182,763
1915 ..	188,178,700	10,312,934	4,748,904,600	64,702,574
1916 ..	172,192,800	13,432,761	5,255,503,900	88,793,778
1917 .	133,153,480	16,708,035	4,979,076,900	112,787,619
1918 .	101,793,700	21,409,710	3,695,772,100	138,521,491
1919 ..	162,665,500	33,911,554	3,528,756,500	178,955,943
1920 ..	147,432,400	47,585,814	4,760,000,000	315,717,631
1921 ..	145,894,900	23,924,879	3,038,246,200	137,132,298
1922 .	201,953,000	26,474,623	4,312,667,000	142,436,751
1923 ..	145,017,400	21,010,689	4,323,865,600	138,251,864
1924 ..	163,056,400	27,782,126	4,585,096,400	153,448,106
1925 ..	189,531,200	30,501,416	4,636,720,200	150,627,835
1926 ..	168,326,800	21,781,178	3,922,796,700	116,052,953
1927 .	200,464,700	23,608,368	4,189,109,600	109,995,715
1928 ..	169,206,900	22,566,494	3,968,198,300	107,298,462
1929 ..	166,637,700	20,753,279	3,764,852,400	99,263,087
1930 ..	136,987,500	14,469,350	2,490,549,400	61,305,421
1931 ..	133,516,100	10,895,216	1,790,157,000	37,322,557
1932 ..	141,662,700	10,419,740	2,302,612,500	43,614,419

AVERAGE PRICES FOR YARN AND CLOTH EXPORTS

(*Compiled from Board of Trade Returns*)

	Yarn		Cloth	
	per lb. d.	taking 1913 as 100	per lin. yd. d.	taking 1913 as 100
1913	17·141	100·00	3·316	100·00
1914	16·096	93·90	3·313	99·90
1915	13·152	76·72	3·269	98·58
1916	18·722	109·22	4·054	122·25
1917	30·115	175·68	5·436	163·93
1918	50·477	294·48	8·995	271·26
1919	50·033	291·89	12·171	367·03
1920	77·463	451·91	15·918	480·03
1921	39·356	229·60	10·832	326·65
1922	31·462	183·54	7·926	392·03
1923	34·772	202·85	7·673	231·39
1924	40·892	238·56	8·032	242·21
1925	38·623	225·32	7·796	235·10
1926	31·018	180·95	7·100	214·11
1927	28·264	164·89	6·301	190·01
1928	32·007	186·72	6·489	195·68
1929	29·889	174·37	6·327	190·80
1930	25·350	147·89	5·907	178·13

INDIA.

IMPORTS OF RAW COTTON INTO INDIA

(In tons)

All ports	Aug., 1932	Sept., 1932	Oct., 1932	Sept., 1931 Aug. 1932
Egypt	217	213	206	14,308
Kenya Colony	1,203	1,473	331	23,389
Tanganyika Territory	—	115	315	552
U S A	124	358	231	51,687
Other countries	94	309	142	8,540
Total, 1932	1,638	2,468	1,228	98,482
„ 1931	3,566	3,813	1,242	84,009
„ 1930	3,310	2,538	2,301	29,266

EXPORTS OF COTTON YARN

(In thousands of lbs.)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
Persia, Aden and Iraq	458	451	382	6,370
China	—	—	—	—
Egypt	28	52	73	489
Other countries	732	419	674	6,059
Total, 1932	1,218	922	1,129	12,918
„ 1931	1,728	1,993	2,339	17,856
„ 1930	1,585	2,055	2,130	17,873

EXPORTS OF COTTON PIECE GOODS (from all ports)

(In lakhs of yards)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
Persia, Arabia, Aden and Iraq	18	18	17	252
Ceylon	12	14	15	131
Straits Settlements, Siam and China	7	7	8	84
East Africa (including Mauritius)	20	20	8	168
Other countries	8	6	9	70
Total, 1932	65	65	57	705
„ 1931	94	101	97	766
„ 1930	67	77	93	865

IMPORTS OF COTTON YARN

Grey (in thousands of lbs.)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
United Kingdom	503	642	565	7,995
Japan	1,055	1,421	856	8,262
Other countries	1,864	1,273	891	10,295
Total, 1932	3,422	3,336	2,312	26,552
„ 1931	1,020	1,588	1,846	16,428
„ 1930	959	2,090	1,625	19,672

IMPORTS OF COTTON YARN—*continued.*

White (in thousands of lbs.)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
United Kingdom	286	277	238	3,172
Japan	36	98	56	534
Other countries	1	1	—	4
Total, 1932	323	376	294	3,710
„ 1931	217	375	207	3,151
„ 1930	212	249	316	3,562

Coloured (in thousands of lbs.)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
United Kingdom	85	77	97	1,485
Japan	—	—	—	—
Other countries	8	1	2	76
Total, 1932	93	78	99	1,561
„ 1931	102	94	66	1,205
„ 1930	162	52	152	2,199

IMPORTS OF COTTON PIECE GOODS

Grey (in lakhs of yards)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
United Kingdom	102	102	61	725
Japan	231	230	204	1,961
America	—	—	—	2
Other countries	1	—	1	35
Total, 1932	234	332	266	2,723
„ 1931	155	170	218	2,161
„ 1930	238	173	150	5,199

White (in lakhs of yards)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
United Kingdom	276	273	175	2,328
Other countries	154	125	115	1,013
Total, 1932	430	398	290	3,341
„ 1931	259	255	183	2,314
„ 1930	222	125	133	3,254

COLOURED, PRINTED OR DYED

(In lakhs of yards)

	Aug., 1932	Sept., 1932	Oct., 1932	Jan.-Oct., 1932
United Kingdom	216	234	147	1,600
Continent	16	21	13	128
Japan	292	228	184	1,680
Other countries	3	3	2	19
Total, 1932	527	486	346	3,427
„ 1931	205	225	231	1,795
„ 1930	274	189	143	3,116

U.S.A.

COTTON CONSUMPTION.

The following figures of the cotton consumed by the mills of America (excluding linters) are taken from the United States Census Bureau Reports:—

	Bales 1932–33	Bales 1931–32	Bales 1930–31	Bales 1929–30
August	403,000	426,000	352,000	558,000
September	492,000	464,000	394,000	546,000
October	502,000	462,000	444,000	641,000
November	504,000	429,000	415,000	544,000
December	—	416,000	406,000	454,000
January	—	435,000	454,000	577,000
February .. .	—	450,000	434,000	495,000
March	—	489,000	491,000	509,000
April .. .	—	367,000	508,000	532,000
May	—	332,000	466,000	474,000
June . .	—	321,000	455,000	405,000
July	--	279,000	451,000	379,000
Total for 12 months	—	4,870,000	5,270,000	6,114,000

Reviews on Current Cotton Literature.

"COTTON YEAR BOOK OF NEW YORK COTTON EXCHANGE." A comprehensive presentation of statistics of world supply and distribution of American and foreign growths of cotton, together with other statistical data of interest from a cotton market standpoint, is contained in the fifth Cotton Year Book just issued by the New York Cotton Exchange. In addition to statistical information, the book contains a "cotton report calendar" for 1933, in which are listed all important cotton trade reports scheduled to be issued through the coming year by governmental and private agencies, and an explanation of statistical terms used by the cotton trade.

The statistics on production, consumption and stocks, contained in the book, show graphically the piling up of world supplies which resulted in the decline of the price of American cotton last summer to the lowest level on record. The comparative figures on consumption of American and outside growths bring out strikingly the comparatively large use of American cotton and relatively restricted use of outside growths last season. The statistics on consumption by major divisions of the industry show the high activity of mills of the Orient while mills of Europe and the United States have been curtailing heavily.

The book consists of 234 pages, on which are found 91 tables and 40 charts. It was compiled by the New York Cotton Exchange Service Bureau under the direction of Alston H. Garside, Economist of the Exchange.

"DIE DEUTSCHE TEXTIL-INDUSTRIE, 1932 33" Published by Verlag fur Borsen und Finanz Literatur A G , Berlin and Leipzig Price 20 marks

A very comprehensive directory of every section of the German textile industry, including the cotton, woollen, linen and jute trades Details relating to plant, capital, dividends, directors' names, etc , are given

"INDIAN COTTON FACTS, 1932" Published by Toya Menka Kaisha Ltd , Bombay

As in past years, this little booklet succeeds admirably in the carrying-out of its self-imposed task of making its contribution to the available supply of statistical data referring to Indian cotton

As a reference book it is exceedingly useful, and comprises a valuable collection of statistical matter relating both to East Indian cotton and the Indian cotton trade Some of the more important tables deal with such subjects as the Government cotton crop reports, yield per acre, raw cotton exports, cotton prices, yarns spun in India, piece goods production, description of goods produced, imports and exports of yarns and piece goods, etc

"SKINNER'S COTTON TRADE DIRECTORY OF THE WORLD, 1932-33," has just been published Price 20s post free

Like its many forerunners, the current issue (the tenth) is an excellent publication, invaluable to all those having dealings with cotton spinners and manufacturers, cotton importers and exporters, finishers, merchants, machinists, etc

Substantial efforts have again been made to augment the information contained therein, whilst at the same time simplifying reference In the latter connection an index of the names of all firms, companies, etc , contained in this edition is included, a new feature which will undoubtedly be welcomed and prove advantageous to numerous users

"COTTON YEAR BOOK OF THE NEW YORK COTTON EXCHANGE, 1932" A comprehensive and graphic picture of the world supply and world distribution of all kinds of cotton is contained in the fifth Cotton Year Book recently issued by the New York Cotton Exchange In this book will be found the essential statistical facts, not only as to American cotton, but also regarding outside growths, together with data indicating economic factors which affect the world cotton trade and influence the market value of American and outside growths of cotton

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American cotton This comprehensive and correlated compilation of world cotton statistics is submitted with the purpose of assisting all who are interested in cotton in informing themselves as to fundamental conditions and trends in the world cotton trade

This year book was compiled under the direction of Mr Alston H Garside, Economist of the Exchange, in collaboration with the Committee of the Exchange on Information and Statistics

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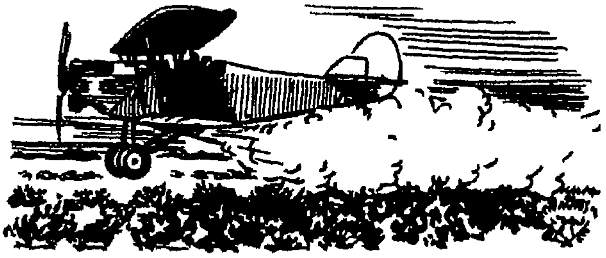

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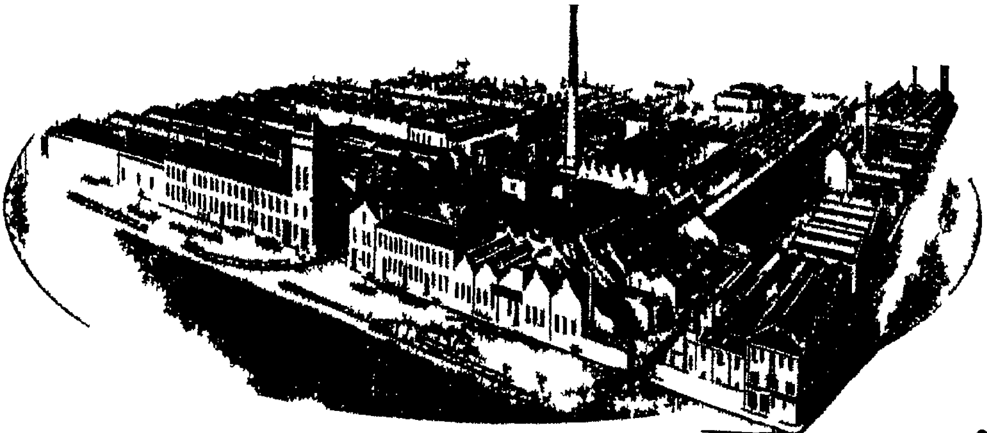

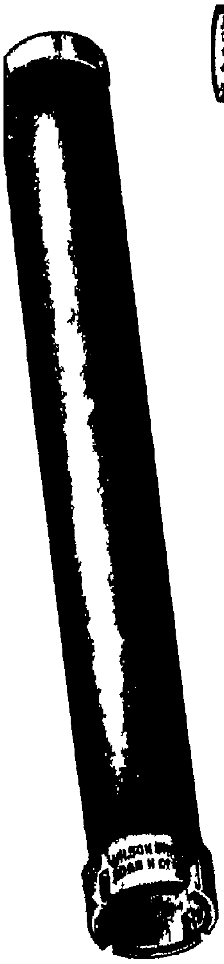

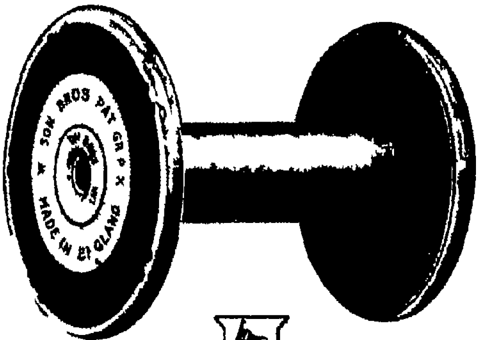

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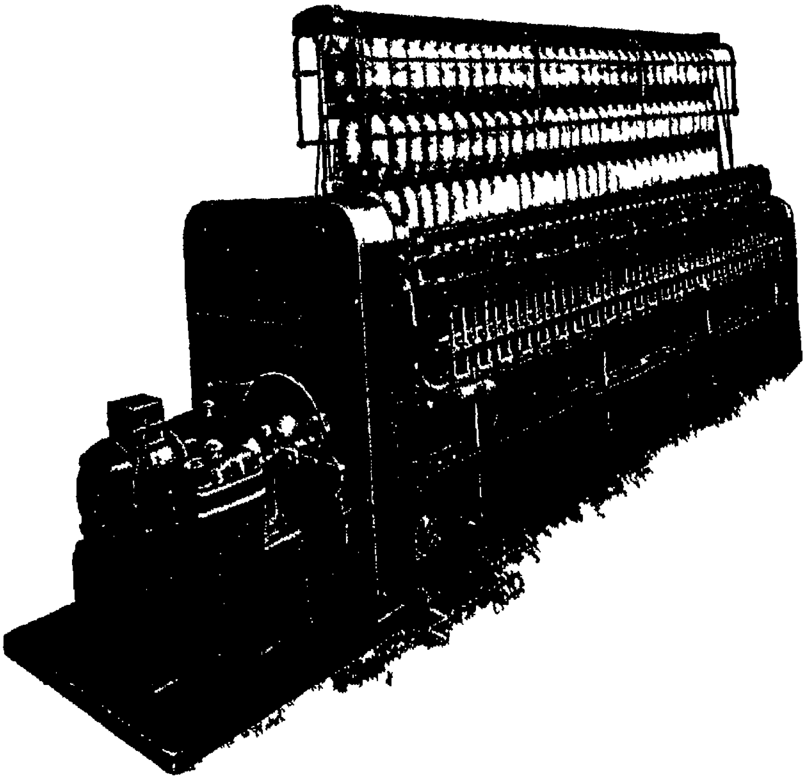

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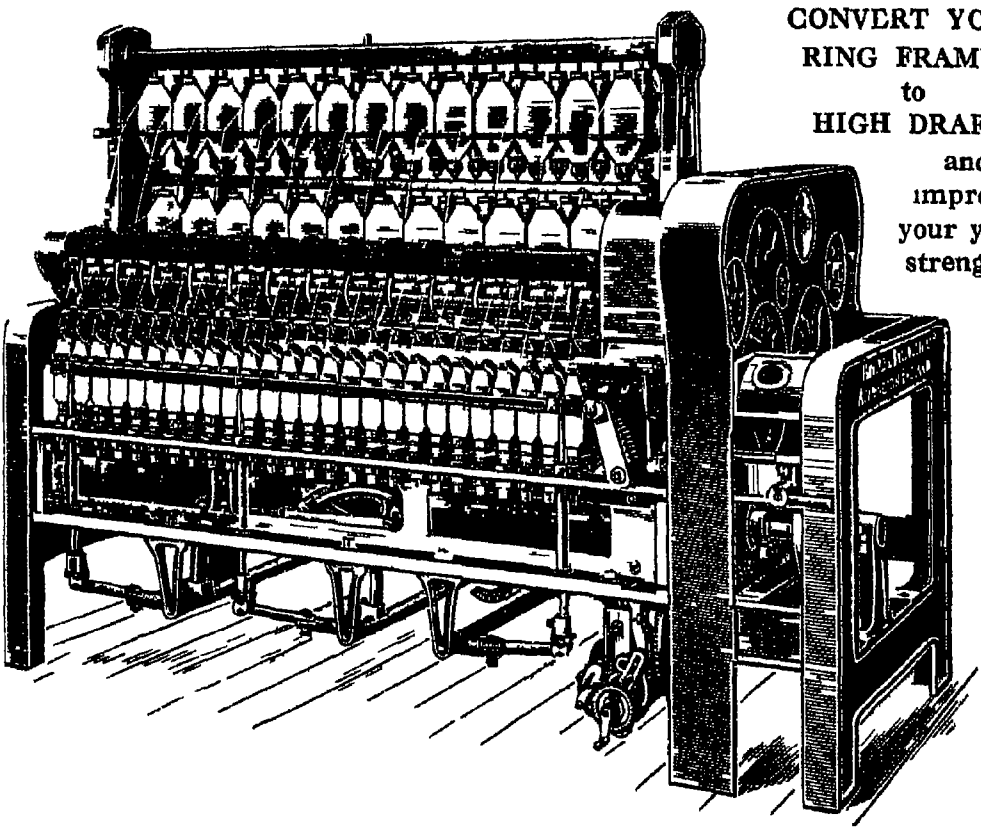

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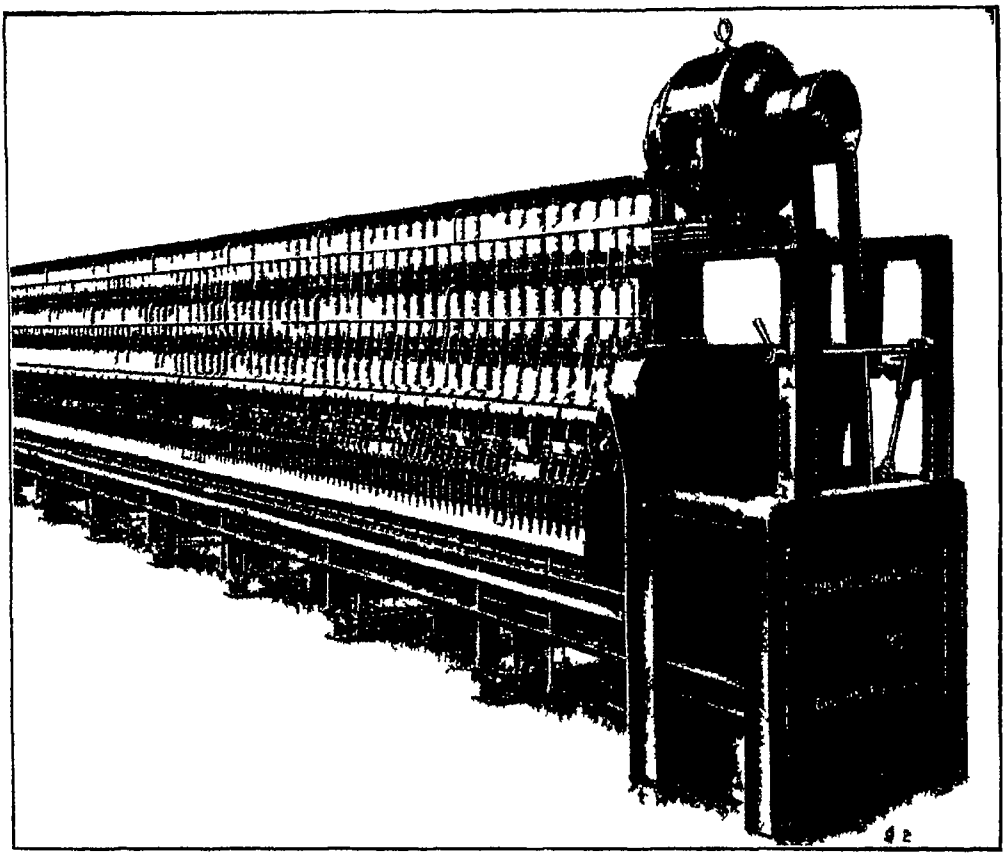

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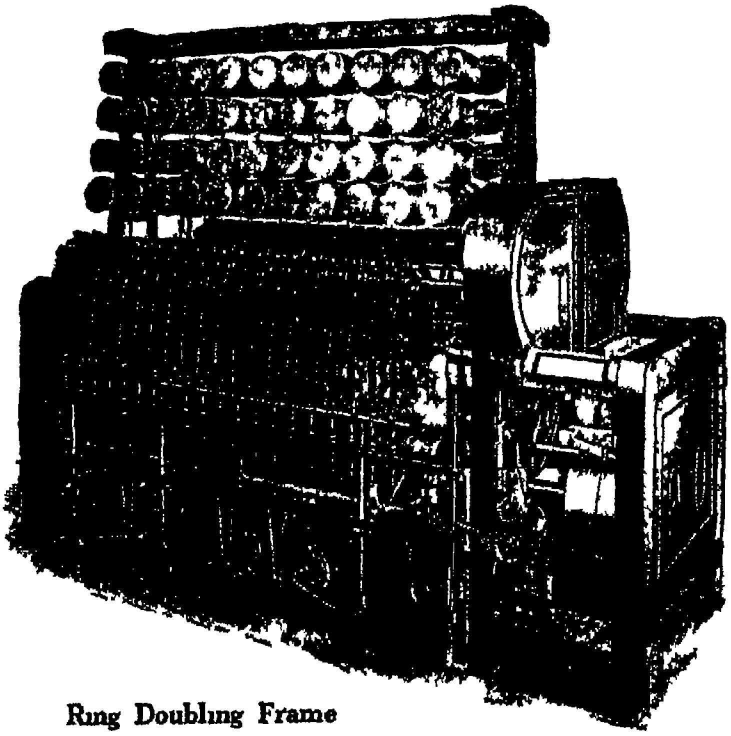

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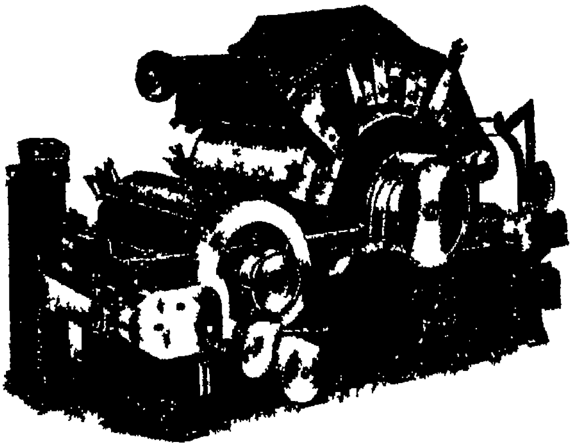

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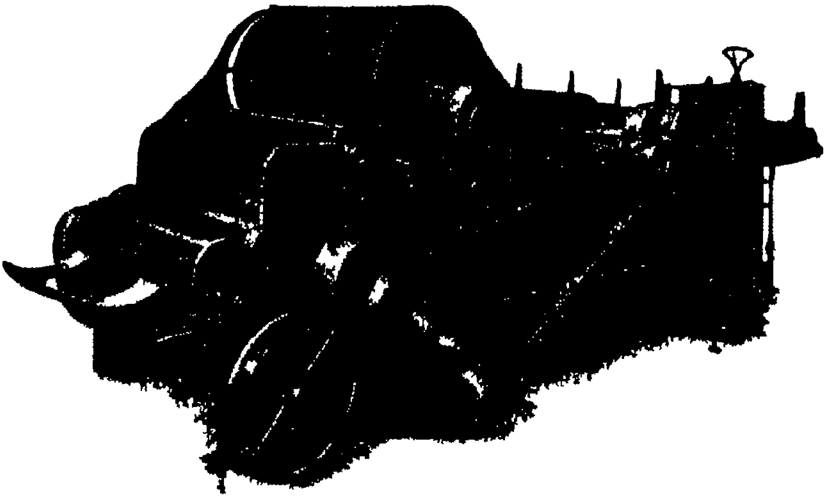

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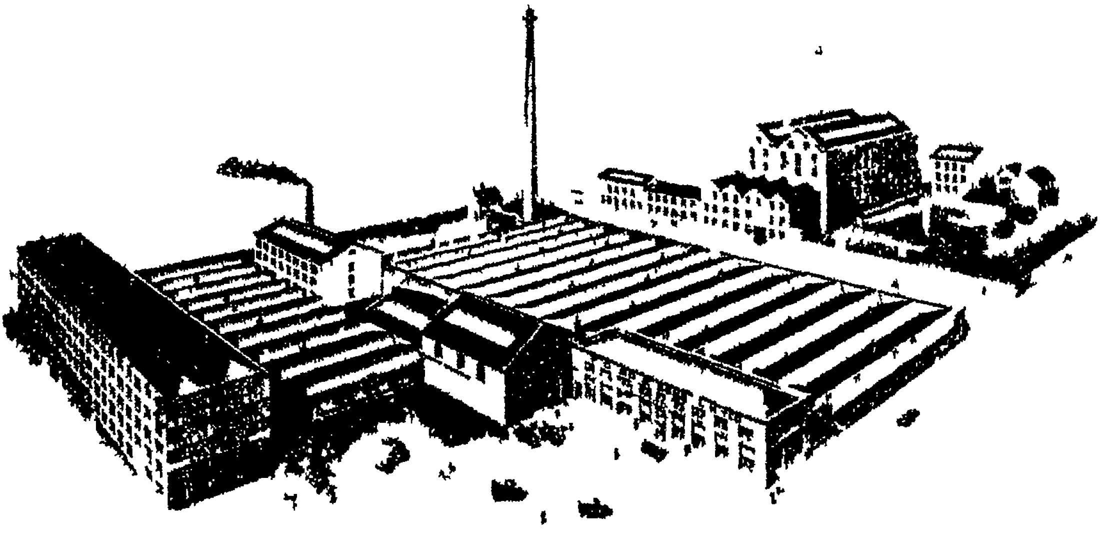

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Brooks & Doxey, Ltd. .. 429
"Commerce & Finance" .. 405
Cook, Thos., & Son, Ltd. .. 407
Courtaulds Ltd., *outside back cover*
Cotton Export Co. "Missr" Ltd., *inside back cover*
Dixon, R. L., & Brother .. 361
Dobson & Barlow, Ltd. .. 427
Dodd, S., & Sons 430
Eggerichs, Franz Emil .. 386
Fawcett, Preston & Co., Ltd. 335
François, L. F., & Cie .. 361
Lord Bros., Ltd. 429
Marsden, C. W., Ltd. .. 390
Meynell, Henry, & Co. .. 426
Munds, Winslow & Potter .. 361

PAGE
Platt Bros. & Co., Ltd. .. 428
Reinhart & Co. 372
Reynolds & Gibson 357
Rieter & Co., Joh. Jacob .. 399
Scholten's, W. A., Chemical Works, Ltd. 390
Skinner, Thos., & Co. .. 324
Société Alsacienne de Constructions Mechaniques .. 400
Standard Marine Insurance Co. 367
Taylor, Lang & Co., Ltd. .. 405
Textile Development Co. .. 396
"Textile, La," Société Co-operative 335
Textile Paper Tube Co., Ltd. 324
Tweedales & Smalley (1920), Ltd. 323
Universal Winding Co. .. 395
Weld & Co. 371
Wilson Bros. Bobbin Co., Ltd. 425
Worrall, John, Ltd. .. 400

CONTENTS

VOL. XI, No. 43.

PAGE

16TH INTERNATIONAL COTTON CONGRESS 299

MINUTES OF MEETING OF THE INTERNATIONAL COTTON COMMITTEE 300–308

Election of President, 300 , Election of Senior and Junior Vice-Presidents, 301 ; New Affiliated Association, 301 ; Moisture in American Cotton, 301 ; False-packed Cotton, 302 , Net Weight Contract for Cotton-covered Bales, 302 ; Tariffs, Currency Restrictions, 302 ; Congress of International Exchanges, 302 ; Congress of the International Chamber of Commerce, 303 , Alterations to Statutes, 303 , State of Trade Reports England, 303 ; Italy, 303 , France, 303 ; Belgium, 304 , Czecho-Slovakia, 304 , Sweden, 304 ; Switzerland, 304 ; Germany, 305 , International Cotton Congress, 307 ; Limitation of Credits, 307 ; Secretary's Visit to U.S A., 307 , International Cotton Loom Statistics, 308 ; New Offices, 308 , Accounts, 308.

CONGRESS ARRANGEMENTS 309–312

STATE OF TRADE REPORTS 313–322

Austria, 313 ; Belgium, 315 ; China, 316 , England, 316 ; France, 316 ; Germany, 317 ; Holland, 318 , Italy, 319 ; Japan, 319 ; Portugal, 321 ; Spain, 321 ; Venezuela, 322

COTTON GROWING 323-339

Algeria, 325 ; Argentina, 325 ; Brazil, 325 ; Belgian Congo, 327 , China, 327 ; Chosen, 328 ; French Equatorial Africa, 329 ; French Indo-China, 329 ; French Morocco, 329 ; Haiti, 329 , Manchuria, 329 ; Mexico, 329 ; Nigeria, 330 ; Peru, 330 ; St. Vincent (British West Indies), 330 ; Sudan, 331 ; Uganda, 331 ; Union of South Africa, 331 ; U.S S R., 332 ; The World's Cotton Supply, 334 ; World's Cotton Acreage and Production, 336.

INTERNATIONAL COTTON STATISTICS 340–349

Short Time Table, 341 ; Consumption, 342 ; Stocks, 344 ; Spindles, 346 ; Sundries, 349.

AMERICAN COTTON 350-367

Final Ginning Report, 351 ; Grade, Staple Length and Tenderability Report, 352 ; Dates of Crop Reports, 353 ; U.S. Bureau of the Census Ginning Reports, 353 ; Geographic Distribution of Staple Lengths, 354 ; Digest of Farm Relief Plan, 358 ; New Head of Federal Farm Board, 359 ; American Cotton Standards, 360 ; Exports of Raw Cotton, 362 ; Georgia's Cotton Holiday, 362 ; Smaller Proportion of Untenderable Cotton, 362 ; Crop Reports, 363 ; Crop Letters, 365.

EGYPTIAN COTTON 368–378

Joint Egyptian Cotton Committee, 368 ; Alexandria Testing House Charges, 369 ; Developments in Cotton Cultivation, 370 ; Larger Cotton Acreage Expected in Egypt, 374 ; Market Letter, 375 ; Government Cotton, 377 ; Statistics of Cotton Ginned, 377 ; Cotton Stocks in Alexandria, 377 ; Market Report, 377 ; Exports of Cotton, 378.

EAST INDIAN COTTON 379–389

Final Official Forecast, 379 ; Activities of the Indian Central Cotton Committee, 381 ; Cotton Spinning Tests on Indian Cotton, 382 ; Spinning Test Results for Punjab American 4F, 384 ; Spinning Test Results for Broach Cotton, 385 ; India, 386 ; Indian Imports and Exports, 388.

CONTENTS—*Continued.*

PAGE

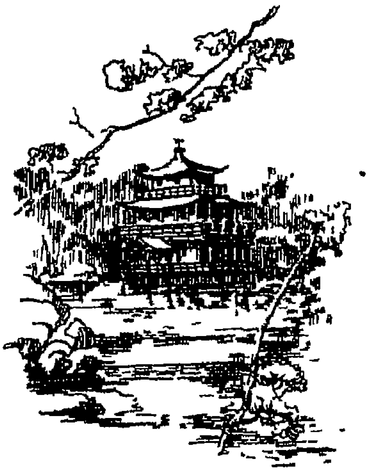
TECHNICAL SECTION 390–399
Ring and Traveller Designs and Speeds, 391; Improved Warp Stop Motion, 394; New Type Automatic Loom, 397; New Back Stripping Motion, 397; New Cotton Picker in the U S S R, 399

COTTON MILL NOTES 400–410
Industrial Conditions in Japan, 401; Textile Wages in Japan, 403; Wages in the Lancashire Cotton Industry, 404; The Hungarian Textile Industry, 404; Poland, 406; Short Time Working in the Polish Cotton Spinning Industry, 406; The Polish Textile Strike, 407; The Latvian Textile Industry, 408; Limitation of Imports in Greece, 408; U S.S.R. Textile Wage Agreements, 408; U S S R., 409; Brazil, 409; Colombia, 410; Cotton Spindles in the Smaller Sundry Countries, 410

MISCELLANEOUS 411–413
British Empire Cotton Growing, 411; Reduced Freight Rates on Cotton to Czecho-Slovakia, 411; Per capita Consumption of Cotton Goods in U S.A., 411; U S National Cotton Week to be held again, 412; Effort to Incorporate Moth Repellants in Dyestuffs in U.S A., 412; Grade and Staple Report Dates Given, 412; Russian Cotton in Great Britain, 413; Twistless Yarn, 413.

COTTON TRADE STATISTICS 414–423
Yarn Exports from the United Kingdom, 414; Cloth Exports from the United Kingdom, 415; Italian Imports of Cotton Goods, 416; Italian Exports of Cotton Yarn, 417; Italian Exports of Cotton Piece Goods, 418; Quantities and Value of Cotton Cloths Exported, Japan, 420; U.S S R, 422; Estimated Production of Rayon Yarn by Countries and Processes, 423

REVIEWS ON CURRENT COTTON LITERATURE 423–424



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ANDREW CASSNER (Yugo Slavia)

The following are the names of the officially appointed substitutes
H WINDFELD HANSEN (Denmark)
T ASHURST (England)
JOHN POGSON (England)
OTTO ANNINGER (Austria)
M LAVONIUS (Finland)
ROGER SEYRIG (France)
EDMUND DILTHEY (Germany)
DR WALTER BÖHM (Germany)
SIR NESS WADIA K B E C I E (India)
DR SILVIO A SOLDINI (Italy)
E D V ERICSSON (Sweden)

Besides the above countries CHINA EGYPT and ESTHONIA are affiliated

---

General Secretary
N S PEARSE

Hon Secretary
JOHN POGSON

Expert Adviser
ARNO S PEARSE

Head Offices
26 CROSS STREET MANCHESTER 2

Telegraphic Address
INVITE MANCHESTER

Telephone No
1520 BLACKFRIARS

Solicitors
JOHN TAYLOR & CO
12 Exchange Street Manchester

Auditors
DAVID SMITH GARNETT & CO
61 Brown Street Manchester

INTERNATIONAL COTTON BULLETIN

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XVI International Cotton Congress

PRAGUE & CARLSBAD
7th to 10th JUNE, 1933.

THE attention of members and delegates to the sixteenth International Cotton Congress in Prague and Carlsbad is drawn to the Programme which appears elsewhere in the BULLETIN

Due note should be taken that the date of the Congress has been brought forward by one day, and will commence on Wednesday June 7 instead of Thursday June 8 On the Friday following there will be no Congress discussions but the time will be taken up in travelling to Carlsbad from Prague

Those members who intend to participate in this Congress, and who have not yet sent in their names to this office, should do so at the earliest opportunity, through their own national Associations

HEAD OFFICE CHANGE OF ADDRESS

Attention is also drawn to the fact that the Head Office of the International Cotton Federation has been removed to Midland Bank House, 26, Cross Street, Manchester, 2

EXTRACTS of MINUTES of MEETING of the INTERNATIONAL COTTON COMMITTEE, held at the Offices of the Comite Central Industriel, 33, Rue Ducale, Brussels, on Monday, 20th March, 1933, at 9-30 a.m.

There were present Messrs Paul Schlumberger (Vice President), Frederick Holroyd, J P , Count Jean de Hemptinne Past Presidents), R Brasseur (Belgium), Dr Ernest Zucker, Dr D Zachystal (Czecho-Slovakia), W H Catterall, J P , F Mills, J P (England), R A de la Beaumelle (France) Dr W Bohm, Dr Hendrik van Delden (Germany), Joan Gelderman (Holland), Dr G Mylius (Italy), Alex Engblom Sweden) Caspar Jenny (Switzerland), John Pogson (Honorary Secretary), Arno S Pearse (Expert Adviser), N S Pearse (General Secretary), Pierre de Smet and Mr Henen (Secretaries of the Belgian Association)

Apologies for non attendance were received from Messrs John Syz (Past President), Arthur Kuffler, Otto Anninger (Austria), H Sebbelov, H Windfeld Hansen (Denmark), John H Grey, J P , T Ashurst (England), Baron K E Palmen, M Lavonius (Finland), Roger Seyrig (France), Geh Kom Otto Lindenmeyer, E Dilthey (Germany), Robert von Szurday (Hungary), Sir Ness Wadia, Sir Thomas Smith (India), Dr S A Soldini (Italy), K Shimada (Japan), E Blikstad (Norway), H P Taveira (Portugal), Santiago Trias (Spain), and Axel Bergengren (Sweden)

Mr F Holroyd (England) occupied the chair at the inception of the meeting

Before commencing the business, Count JEAN DE HEMPTINNE, in the name of the Belgian Association, extended a cordial welcome to the delegates, and expressed the hope that the discussions and decisions would be beneficial to all concerned

He referred in sympathetic terms to the loss sustained by the International Federation owing to the deaths of Mr William Howarth (England), Mr John Smethurst (England), the first Honorary Secretary of the International Federation, and to Mr A E Hakanson (Sweden)

ELECTION OF PRESIDENT

Mr F HOLROYD moved that Mr Paul Schlumberger, Vice-President of the International Cotton Federation, be elected President In doing so he paid a warm tribute to Mr Schlumberger for the distinguished services he had rendered to the International Federation for a long period, and bespoke for Mr Schlumberger a measure of health and strength to fulfil the duties of the office

Count JEAN DE HEMPTINNE seconded the proposal which, on being put to the meeting, was carried with acclamation

Mr Holroyd then vacated the chair which was taken by Mr Schlumberger, who, in appropriate words, thanked the Committee for the high honour they had conferred upon him

ELECTION OF SENIOR AND JUNIOR VICE PRESIDENTS

On the motion of Mr W H CATTERALL (England) seconded by Count JEAN DE HEMPTINNE (Belgium) Mr Fred Mills (England) was unanimously elected Senior Vice President of the International Federation

Mr F HOLROYD (England) proposed and Dr G MYLIUS (Italy) seconded that Dr H van Delden (Germany) be elected Junior Vice President of the International Federation and the motion was carried unanimously

Both these gentlemen expressed their appreciation of the honour bestowed upon them as individuals as well as upon the organizations which they represented

WELCOME TO NEW MEMBERS OF THE COMMITTEE

A hearty welcome was accorded to Mr W H Catterall (President of the English Federation) who had been elected as official representative in place of Mr William Howarth deceased and also to Mr John Pogson the Honorary Secretary who had been appointed as official substitute for England on the International Committee

MINUTES

The minutes of the previous meeting which had already been circulated were confirmed and signed by the Chairman

NEW AFFILIATED ASSOCIATION

The application of the Yugo Slavian Cotton Spinners and Manufacturers Association for admission to membership of the International Cotton Federation was unanimously agreed to and the General Secretary was instructed to inform them accordingly

MOISTURE IN AMERICAN COTTON

Reports presented in regard to this subject stated that in Italy a few tests had been made which showed an excess of 9 per cent moisture content England was opposed to the principle of fixing a standard amount of moisture for American cotton but had invited the British Cotton Industry Research Association to undertake a series of tests purely for the purpose of information In Germany tests already taken showed an improvement in regard to moisture content Whilst previously 50 per cent of the tests taken showed an excess of 8½ per cent moisture only 35 per cent of the tests lately taken exceeded 8½ per cent moisture

Following discussion a resolution in the following terms was adopted —

> This Committee reaffirms the necessity of compiling statistics of moisture tests for American cotton received c i f by the mills, and requests the affiliated associations to supply the results of tests for three months at least

It was reported by Mr ARNO S. PEARSE that a cotton sampling machine, the invention of Mr A. Tobler, Director of the Cotonificio di Solbiate, Solbiate Olona, would be exhibited at the forthcoming International Cotton Congress at Prague.

FALSE PACKED COTTON

Mr F. MILLS (England) raised the question of the growing and serious complaints of false packed cotton emanating mainly from Texas and principally affecting staple, which was causing enormous difficulties in the preparatory and spinning processes. He stated that immediate action should be taken to combat the trouble.

Mr F. HOLROYD (England) and Mr PAUL SCHLUMBERGER (France) supported the complaint referred to, and with the object of eliminating the evil the following resolution was, on the motion of Mr MILLS, seconded by Dr VAN DELDEN, adopted unanimously:—

> This Committee expresses its strongest disapproval at the growing practice of false packing of American cotton, largely originating from Texas, and particularly relating to to staple.
>
> In order to enable spinners to trace offending parties, this Committee requests that the United States Department of Agriculture devise ways and means of identifying the ginneries from which such cotton has originated.

NET WEIGHT CONTRACT FOR COTTON COVERED BALES

This subject was discussed at some length, but ultimately it was deferred for further consideration at a later meeting of the Committee.

TARIFFS, CURRENCY RESTRICTIONS, QUOTAS AND WAR DEBTS

Reports were received of the steps taken by the various affiliated Associations in connection with the resolution recently passed by the special Tariffs Sub-committee of the International Federation referring to tariffs, currency restrictions, quotas and war debts.

The great majority of those present intimated that their Associations had already communicated the text of the resolution to their respective Governments.

A long discussion followed, particularly on the interpretation of the "most favoured nation" clause, but no action was taken. Mr CASPAR JENNY (Switzerland) expressed the opinion that in no case should there be any interference whatever with the "most favoured nation" clause.

CONGRESS OF INTERNATIONAL EXCHANGES

It was resolved that the President and Mr Brasseur (Belgium) should represent the International Federation at the first meeting of the International Exchanges to be held in Paris from April 24 to April 30, 1933.

CONGRESS OF THE INTERNATIONAL CHAMBER OF COMMERCE

Mr A Kuffler (Austria) was appointed to attend the above Congress at Vienna and failing him that Dr F Zucker (Czecho Slovakia) be invited to represent the International Federation

ALTERATIONS TO STATUTES

The recommendations of the Statutes Revision Sub committee were submitted and the Statutes were amended subject to the necessary legal phraseology being inserted by the International Federation solicitor to whom for this purpose the Statutes would be submitted

The meeting then adjourned for luncheon

STATE OF TRADE REPORTS

On the delegates re assembling the following state of trade reports for the various countries were presented —

ENGLAND

The position in both the spinning and manufacturing sections was unsatisfactory In addition to the entire stoppage of many plants the active machinery was not being worked more than from 65 to 70 per cent of full capacity The prices being received for the productions of both spindles and looms were unremunerative As an emergency measure only a ballot was being taken of the spinning members of the English Federation on a proposal to curtail production by one full week immediately before Easter, with a view to bringing production more into conformity with demand

ITALY

As regards spinning the statistical position showed a slight improvement, as stocks had gone down below 2 kilos per spindle, whilst for years they kept steadily above Engagements had somewhat increased, but prices did not leave any margin of profit, and often did not cover the cost

In the weaving section there was a slight increase in the demand, but margins were still insufficient

With regard to exports it was reported that quotas, financial restrictions and preferential tariffs as well as competition, particularly from Japan were responsible for a continuous reduction of exports, and if it were not that the internal market was at present more active the industry would be compelled to face a further reduction of the production

FRANCE

In the spinning section an improvement had been manifest in December and January, causing a certain diminution in stocks Since then, however, the demand had slackened, with the result that prices had become worse In the weaving section the situation remained unchanged At the end of the last month the activity of the mills was estimated to be about 65 per cent, taking into account those mills totally stopped

BELGIUM

Trade was poor, and the margins showed no profit There were approximately 10 per cent of the spindles indefinitely stopped, whilst as to the rest of the spindles they were producing about 60 per cent of the normal output This estimate also applied to the manufacturing section

CZECHO SLOVAKIA

During the past three months trade in the spinning section had been very bad The mills were working only 40 per cent of full capacity, taking all the spindles working into consideration If all active spindles were taken into account the production amounted to 60 per cent of normal activity An agreement had been entered into by spinners to regulate the production and prices of yarns On the whole, the agreement was said to be working satisfactorily Owing to financial restrictions, however exports to other countries were diminishing week by week, and the prospects were unfavourable In the weaving branch the margins were reported to be worse than those in any other country

SWEDEN

The cotton industry in this country was being hard hit by the depression The mills were mainly engaged on business for the home market, in that the export trade had been seriously affected, among other factors, by the severity of the Japanese and Russian competition

As regards other Scandinavian countries, the position was also unsatisfactory In Finland, Norway and Denmark the financial stringencies and economic difficulties had militated against the possibilities of export

SWITZERLAND

The home trade was fairly good in regard to production only but the prices themselves were very unsatisfactory This was in some measure due to the fact that the production of spindles and looms formerly engaged for export was now being thrown on to the home market In addition the country was suffering from the competition of Italy, Czecho-Slovakia and Austria, which were pouring their goods into Switzerland, where the wages of the work people were comparatively high The export trade in cotton cloth was practically at a standstill, mainly owing to trade restrictions and the fact that profits from agricultural products were so low in countries like Brazil, where voile was a staple cloth and remained unchanged by fashion, that the potential buyer out of sheer necessity had to purchase a cheaper cloth elsewhere The situation was probably aggravated by the proposal of the German Government to raise tariffs against goods entering Switzerland

Wages had been reduced to the extent of 25 per cent The spinning mills were working 70 to 75 per cent of full capacity, and the weaving mills equal to 60 per cent of normal capacity. Unemployment generally was steadily becoming worse.

GERMANY

(*Spinning Section.*) Spinning conditions had gone from bad to worse. The number of spindles had decreased from 11,260,000 in 1930 to 10,570,000 in 1932. The spinning industry in Germany was suffering from the competition of artificial silk, whilst the rate of exchange of other countries, particularly Great Britain, which were now off the gold standard was adversely affecting them.

Efforts had been made to overcome the country's difficulties by adopting various measures. Short time had been tried, and had resulted in losses being sustained. In other instances two- and three-shift working had culminated in heavy losses. An agreement had been entered into between the Employers' and Operatives' Associations whereby wages had been stabilized at the present figure until January, 1934.

(*Weaving Section.*) The position in the manufacturing section showed little change as compared with the previous quarter. Short-time working had been tried without success, owing largely to the varying character of the different mills.

Prices had been unsatisfactory. In sheds producing grey and bleached cotton goods the capacity was 75 to 80 per cent of normal; in fancy cloths the activity on the average was lower still.

(*Other State of Trade reports will be found on pp.* 313-322.)

In view of the unsatisfactory nature of the reports presented, a general discussion ensued as to the best means of dealing with the situation from an international point of view.

Mr. HOLROYD stressed the point that practically every country was working short time, whilst Mr. MILLS asked whether it was feasible to discuss the question of a holiday in all cotton-consuming countries.

Mr. CATTERALL referred to the fact that as an emergency measure the spinning members of the English Federation had already a ballot pending to ascertain whether they were prepared to stop a whole week immediately preceding Easter. Continuing, he said that one of the difficulties with which England was faced was that if the spinners there curtailed production, they were endangering their trade not only to Japan but to the continent of Europe. In that the world was practically running only 70 per cent of full time, he was of opinion that an effort should be made, if possible, to secure an all-round curtailment of production. The position was so serious that it was impossible to devise schemes or cartels that would be of immediate utility, and for that reason he urged a common stoppage of a week in all countries at the earliest possible moment. He said the Committee ought to be bold enough to take a stand on this most urgent matter.

The CHAIRMAN doubted whether without power the affiliated associations would respond to a recommendation to stop a whole week It would largely depend upon good will, and any resolution adopted would be in the form of a recommendation

Dr H VAN DELDEN (Germany) said that they had tried short time, and in other ways had reduced production as far as possible In order to prevent individual firms from working double shifts, which were in consequence losing money, the banks were now refusing to finance such concerns

Mr MILLS reminded the Chairman that the English Federation itself had no power of compulsion to enforce a short-time recommendation, but it must be patent to all that there was a greater prospect of such recommendation being observed if the movement was organized and supported internationally

Continuing, Mr Mills said that while hope was expressed that some of our difficulties might be alleviated by the World Economic Conference, the need for immediate relief was obvious, and this could be done more effectively by those directly interested in the trade The failure of action so far had arisen from the fear of playing into the hands of one's competitors A drive now on an international scale would indicate more than anything else the solidarity of the International Federation, and he urged that the situation should be faced with courage and conviction in order to prevent the further dissipation of capital which had continued far too long Whilst he had always recognized that short time was no actual remedy for individual countries, the suggestion already made, to be adopted internationally, would prove a useful palliative in the present emergency

Dr ZUCKER said that from his point of view the present position appeared to be one of the survival of the fittest, and asked whether this was a most desirable method of dealing with the present distresses He thought that some agreement between the various Governments might be the means of securing uniformity of curtailment for one or two weeks to ease the position

Mr CATTERALL deplored the policy of a "war of the jungle," which was equal to the survival of the fittest The weak seller fixed the market price for all his competitors, and even the cleverest spinner was forced to accept prices wholly unremunerative He pleaded for immediate action to be taken to overcome the present emergency A spinner who was working more than 70 per cent of full time under present conditions was taking the trade which rightly belonged to others If all pulled together, the position was a simple one to adjust

Dr VAN DELDEN opposed any intervention by the State, whilst Mr HOLROYD drew attention to the unanimity expressed by European spinners on the question of short time during the period of the cornering of the cotton market by Sully in 1903, which was the means of establishing the International Federation

Mr ARNO S PEARSE referred to a paper prepared by Mr Otto Bankwitz, which the General Secretary was asked to circulate to each member of the Committee

Mr JENNY said the real corrective could only be accomplished by bringing the cotton spinning industry of the world to a one shift system

Dr MYLIUS said that the sanction for a week's stoppage might be obtained, but any further general curtailment of production would be impossible as long as the present degree of unemployment persisted His own Government was averse to schemes which had a tendency to increase unemployment

Dr BOHM, speaking on behalf of the manufacturing section, said that one of the reasons why the weaving section in Germany was opposed to short time was the difference in character between individual mills in that country Some were working 30 per cent and others as much as 150 per cent of normal capacity Mills with a low state of activity objected to being called upon to work any particular amount of short time when other competitors were working double shifts From their experience in the weaving section, it had been found impossible to fix a scale for the reduction of output, as the scale proposed was not accepted by a sufficient majority of the mills

After further discussion the following resolution was unanimously adopted —

> ' That, as a first step towards bringing spinning production in conformity with demand this Committee unanimously recommends that all members of the affiliated associations should close their mills for one week at the earliest possible moment during the month of April '

It was also resolved to forward the following cable to the Japan Cotton Spinners' Association —

> " Committee International Cotton Federation most anxious bring world s production into line with demand Appeals your organization co-operate earnestly Hope you will send representative delegation Prague International Cotton Congress for discussion '

INTERNATIONAL COTTON CONGRESS

The arrangements for the approaching International Cotton Congress at Prague and Carlsbad were reported upon

It was decided that the next meeting of the International Cotton Committee should be held on the morning of Tuesday, June 6 to be followed in the afternoon by the meeting of the Joint Egyptian Cotton Committee

LIMITATION OF CREDITS

This question will form one of the subjects for discussion at the Congress In the meantime copies of replies received from several countries on the matter were laid bfore the Committee

SECRETARY'S VISIT TO U S A

It was resolved that Mr Norman S Pearse, the General Secretary, be instructed to visit the Cotton Belt this year in order to obtain information relating to the condition of the cotton crop, as well as to investigate trade conditions generally

INTERNATIONAL COTTON LOOM STATISTICS

It was decided to continue the collection of statistics with regard to the numbers of ordinary and automatic looms in the world, and the extent to which they are running

NEW OFFICES

The alteration of the address of the Headquarters of the Federation was reported by the General Secretary, and the steps taken by him were approved The new address is Midland Bank House, 26, Cross Street, Manchester, 2

ACCOUNTS

The accounts for the year ending December 31, 1932, were presented and approved

VOTE OF THANKS

On the motion of Mr HOLROYD, a cordial vote of thanks was passed to the Chairman, who suitably replied, and the meeting concluded at 6-45 p m

XVI International Cotton Congress

PRAGUE (PRAHA) and
CARLSBAD (KARLOVY VARY)
JUNE 7th—10th 1933

PRESIDENTS OF THE CONGRESS

M. RICHARD MORAWETZ, Vice-President, Spolek ceskoslovenskych prumyslniku textilnich (Czechoslovak Textile Manufacturers' Association), Praha (Prague).

M. THEODOR LIEBIG, President, Allgemeiner Deutscher Textilverband, Reichenberg.

INTERNATIONAL COTTON COMMITTEE MEETING

TUESDAY, JUNE 6TH, at 10-30 a.m.

JOINT EGYPTIAN COTTON COMMITTEE MEETING

TUESDAY, JUNE 6TH, at 2-30 p.m.

The Congress proceedings will take place in the Halls of the Hospodarsky svaz ceskoslovenskych pradelen bavlny (Czechoslovakian Master Cotton Spinners' Association), Revolucni, 1a, Praha (Prague), and the Kursaal, Karlovy Vary (Carlsbad).

WEDNESDAY, JUNE 7th, 1933.

10-0 a.m. Inaugural Reception in the Main Hall of the Hospodarsky svaz ceskoslovenskych pradelen.

Opening by M. Richard Morawetz, President of the Congress. Addresses will be delivered by Dr. Matousek, Minister of Commerce and Industry, Mr. Paul Schlumberger, the President of the International Cotton Federation, His Excellency Ahmed Abdel Wahab Pacha, President of the Joint Egyptian Cotton Committee.

2-30 p.m. FIRST SESSION OF CONGRESS

Sectional Meetings:—

American Section.
Egyptian Section.
Indian Section.

5-0 p.m. Reception and Garden Party offered to delegates and ladies by the Ministry of Commerce and Industry, in the Waldstein Palace, Praha III (Prague III) (Waldsteinské námestí).

Evening. Free.

THURSDAY, JUNE 8th, 1933.

9-30 a.m. Second Session of the Congress.

General Subjects.

2-30 p.m. Technical Subjects.

5-0 p.m. Reception by the Lord Mayor of Prague, Dr. K. Baxa, at the Old Town Hall, Staromestské námestí.

Tea will be offered to delegates and ladies.

8-30 p.m. Banquet offered to delegates and ladies by the Czechoslovakian Associations at Smetanova sín (Smetana Hall) of the Obecní dum mesta Prahy (Municipal Palace).

FRIDAY, JUNE 9th, 1933.

10-0 a.m. Committee Meetings.

About 2-0 p.m. Departure by special train to Karlovy Vary (Carlsbad).

SATURDAY JUNE 10th, 1933.

At the KURSAAL, KARLOVY VARY (CARLSBAD).

10-0 a.m. Third Session of the Congress in the Kursaal.
Chairman: Mr. Theodor Liebig.
Resolutions.

1-0 p.m. [*]Lunch at the Stadt Park Restaurant.

3-0 p.m. Excursion by Funicular Railway to the Freundschaftshohe.

5-0 p.m. Tea offered to delegates and ladies by the Municipality of Karlovy Vary (Carlsbad) at the Freundschaftshohe.

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[*] *At a special reduced price, this lunch is not really part of the programme, but in view of the excursion at 3 p.m. it will be more convenient to delegates if they partake of lunch together.*

SPECIAL NOTICE.

Ladies are invited to all the social functions and to the Inaugural Reception of the Congress.

An identity card, together with the official programme, will be forwarded to each delegate before the Congress. Admission tickets to the various social functions will not be sent by mail to the delegates, who are asked to call for these tickets and also for their Congress Badges at the Information Bureau before the Inaugural Reception. Delegates will take this opportunity of registering their names and addresses in Praha (Prague). Railway tickets to Carlsbad will also be obtainable from the Information Bureau.

Should any delegate not be able to participate in the proceedings at Karlovy Vary (Carlsbad), the Head Office of the International Cotton Federation, 26, Cross Street, Manchester, should be informed of this fact at the earliest opportunity.

An Information Bureau will be opened in the Congress Hall, Revolucní 1a, Praha (Prague I), at the following times:—

Tuesday, June 6	9-0 a.m. to 1-0 p.m. and 3-0 p.m. to 6-0 p.m.
Wednesday, June 7 ..	9-0 a.m. to 1-0 p.m. and 3-0 p.m. to 6-0 p.m.
Thursday, June 8	9-0 a.m. to 1-0 p.m. and 3-0 p.m. to 6-0 p.m.
Friday, June 9	9-0 a.m. to 1-0 p.m

Detailed information relating to the meetings of the Congress and the various social functions given in honour of the Congress will be available at this Bureau. Other information upon the motor tours in and around Prague will also be given by the officials.

All delegates and ladies are invited, upon production of their Identity Card, to become temporary and honorary members of the "Spolecensky Klub" (Society Club), Prikopy 12, Praha II (Prague), as well as to the Deutsches Wirtschafts-Klub at the Hotel Esplanade, Vrchlického sady, 17, Praha II (Prague), during their stay in Praha (Prague).

Congress delegates, and especially the ladies, are recommended to take advantage of sight-seeing tours of the city by motor-cars, which will be placed at their disposal by the Czecho-Slovakian Master Cotton Spinners' and Manufacturers' Association, on June 8 and 9 at 9-30 a.m. Those desiring to participate in any of these excursions should intimate their intention of doing so to the officials in charge of the Information Bureau at Revolucní 1a, *on the day previous to the excursion being made.*

HOTEL ACCOMMODATION.

		Bedroom		Bedroom with bath		
Hotel		Single	Double	Single	Double	Breakfast
Alcron	Kč.	—	—	85	130	Included
Ambassador ...	,,	45	70	65	120	12
Central ...	,,	35	60	35	80	8
Esplanade ...	,,	65	90	80	130	12
Paris	,,	40	70	70	100	10
Sroubek ...	,,	50	100	75	150	Included
Steiner	,,	45	70	—	—	12.50

Tips 10 per cent. extra, but all taxes included.

Hotel reservation in Carlsbad (Karlovy Vary) will be allocated among the delegates by the town authorities Delegates will be informed at which hotel the reservation for them has been made when the railway ticket from Prague (Praha) to Carlsbad (Karlovy Vary) is handed to them by the Information Bureau

It should be noted that all hotel reservations must be made through any branch of Messrs Thos Cook & Son Ltd This arrangement has been made with a view to avoiding the overcrowding of these hotels to the detriment of the hotels usual clientele Messrs Thos Cook & Son Ltd have been appointed the official travel agents of the Congress

Special travel facilities are being made to delegates to the International Cotton Congress by the Czecho Slovakian railways, in that a reduction of 33⅓ per cent is being made on the fare in Czecho-Slovakia upon production of the Identity Card

CUSTOMS FACILITIES

Arrangements are being made whereby upon production of the delegates identity card special facilities will be granted for the passage of the delegates luggage through the Czecho Slovakian customs

The names and addresses of all those intending to participate in this Congress should be in the hands of the *General Secretary of the International Cotton Federation 26 Cross Street, Manchester 2, England no later than May 8th*

Attention is drawn to the following statutes relating to the holding of Congresses —

The Associations in each country shall appoint delegates to attend the Congresses No restriction shall be placed on the number of delegates any Association may send but the voting power shall be as follows —

One vote for each million spindles or part thereof

One vote for each 40 000 looms or part thereof but not more than twenty votes to be given by any one country

Voting shall be by the showing of hands but shall be by ballot if desired by 25 per cent of those present empowered to vote

Fourteen days' notice shall if possible be given to the Secretary at headquarters of any change in the appointment of delegate

The expenses of delegates shall be paid by the Association they represent, or by the delegates themselves

If a delegate be unable to be present he may be replaced by another representative of his Association The representative, however, must present satisfactory credentials to the Committee

Any Association wishing to bring a subject before the annual Congress, or propose the alteration of a rule, shall forward its resolution to the Secretary at headquarters before the end of March

Delegates may speak in English French or German, but it is desirable that they use the English language, in order to obviate, as far as possible, the necessity of translation

In order to expedite the discussions of the Congress the introducer of any subject shall be allowed one hour Subsequent speakers shall be allowed fifteen minutes which the Chairman may, at his discretion, extend to thirty minutes

(Further State of Trade reports are given on a previous page)

AUSTRIA.

SPINNING SECTION

Whilst yarn imports during the year 1932 were only 6 8 per cent less than in 1931, and in spite of the fact that home consumption was reduced by about 40 per cent , imports in January and February 1933, showed considerable reduction, i e , 24 4 wagon loads, against 41 8 wagon loads in the same months of 1932 Reduction conditions in the spinning establishments are nevertheless thoroughly unfavourable, production amounting to an average of 50 per cent of normal, as regards those firms working on one shift, spindles which are wholly stopped being left out of consideration This unfavourable condition with regard to production is attributable on the one hand to steadily diminishing exports the decline in the year 1932 amounting to some 25 per cent as against the preceding year, on the other hand it can be attributed to the substantially diminished capacity for consumption of the home-finishing industry No improvement in conditions can be anticipated in the near future, since consuming capacity can only experience further declines, due to the steadily increasing unemployment

WEAVING SECTION

This branch of the industry also which under normal conditions was scarcely able to cover home requirements, is working at an average of 50 per cent of normal capacity forced thereto by the general shrinkage in demand already mentioned The extent of this shrinkage is reflected in the fact that not only is home production reduced by the percentage already stated, but the imports of piece goods have also declined heavily Whilst, in 1932, 176 wagon loads of piece goods were imported, in 1931 the figure was 462 wagon loads a decline of about 62 per cent In the two first months of 1933, 16 8 wagon loads were imported for the inland market, against 44 2 wagon loads in the corresponding period of 1932 It should be borne in mind, of course, that since May, 1932, restrictions on imports have been in operation

As regards wages, certain minor alterations have been made with regard to piece rates, but the basic rates settled by collective treaties have undergone no alteration The effect of the reductions suffered under the above mentioned head (piece rates), reckoned on the total amount of the wages, will hardly come to more than 6 to 8 per cent on the average On the other hand,

the social burdens have not been reduced up to now, but have even been increased, because the requirements of the industry for the support of the unemployed, as well as the insurance contributions, have been augmented.

The following is the original text in German:—

BAUMWOLLSPINNEREI.

Wahrend die Garneinfuhr im Jahre 1932 nur um 6.8 % geringer war als im Jahre 1931, trotzdem der Inlandsverbrauch einen Rückgang um wenigstens 40 % erfahren hatte, ist der Import in den Monaten Jänner und Feber des Jahres 1933 nicht unerheblich, u.zw. auf 24.4 Wagons gegenüber 41.8 Wagons in den selben Monaten 1932 zurückgegangen. Die Produktionslage der Spinnereien ist nichtsdestoweniger überaus ungünstig und beträgt durchschnittlich 50 % der normalen Kapazitat bei einschichtigen Betrieb, wobei die ganzlich abgestellten Spindeln ausser Betracht gelassen sind. Dieser ungünstige Stand der Erzeugung ist einerseits auf den sich-immer mehr verschärfenden Exportrückgang, der im Jahre 1932 gegenüber dem verausgegangenen Jahr rund 25 % betragen hat, andererseits auf die wesentlich verminderte Aufnahmsfahigkeit der inlandischen Nahindustrie zurückzuführen. Mit einer Besserung der Beschäftigungslage ist für absehbare Zeit nicht zu rechnen, weil die Konsumkraft im Zusammenhang mit der noch immer ansteigenden Arbeitslosigkeit, nur eine weitere Schwächung erfahren kann.

BAUMWOLLWEBEREI.

Auch dieser Zweig der Industrie, der unter normalen Verhältnissen den Inlandsbedarf kaum zu decken in der Lage wäre, arbeitet mit einer durchschnittlich 50 % igen Produktions-einschränkung, erzwungen durch den bereits erwähnten Schrumpfungsprozess des allgemeinen Warenverbrauches. Der Umfang dieses Bedarfsrückganges erhallt aus der Tatsache, dass nicht nur die Inlandsproduktion in dem schon erwahnten prozentsatz eingeschränkt wurde, sondern dass auch die Gewebeeinfuhr sehr bedeutend zurückgegangen ist. Während noch im Jahre 1931 für den Inlandsmarkt 462 Wagons Baumwollgewebe importiert wurden, ist diese Einfuhr im Jahre 1932 auf 176 Wagons, also um rund 62 % gefallen. In den beiden ersten Monaten des Jahres 1933 wurden für den Inlandsmarkt 16.8 Wagons Baumwollgewebe eingeführt, gegenüber 44.2 Wagons im denselben Monaten des Jahren 1932, wobei allerdings zu berücksichtigen ist, dass seit Mai 1932 Einfuhrbeschränkungen für Baumwollgewebe bestehen.

Was die Lohnverhältnisse anbelangt, so wurden wohl betriebsweise gewisse Regelungen, namentlich in Bezug auf die Höhe der Akkordsätze durchgeführt, doch sind die kollektivvertraglichen Grundstundenlöhne während des vorigen Jahres nicht geändert worden. Die Auswirkung der bei den Akkordlöhnern vorgenommenen Reduktion, dürfte — gerechnet auf die Gesamtlohnsumme — kaum mehr als 6 - 8 % im Durchschnitt erreichen. Demgegenüber haben die sozialen Belastungen bisher keine Senkung, sondern im Gegenteil noch eine weitere Steigerung erfahren, weil die Aufwendungen der Industrie für die Arbeitslosenunterstützung, sowie die notleidende Angestelltenversicherung erhöht wurden.

BELGIUM.

The situation in the Belgian cotton industry still remains far from satisfactory According to the statistics published by the Minister of Finance, it appears that Belgium has exported in 1932 less than 21 million kilos of cotton cloth It should be stated that exports in 1931 amounted to 31 million kilos and, in 1929, 44 million kilos

This setback in exports explains the considerable reduction in activity in the Belgian cotton mills In the spinning section 10 per cent of the spindles are stopped for an indefinite period and the spindles still working are working only 60 per cent of their normal capacity In spite of this curtailment of production, the stocks of yarn tend to increase and the sale price to become lower

As a result of the resolution adopted by the International Cotton Committee, the spinning mills affiliated to the Association Cotonniere de Belgique (Master Cotton Spinners Association of Belgium) have decided to stop work during the week April 17 to 22

The activity in the weaving section is comparable with that of the spinning section The weavers in the Ghent district have taken a resolution to stop their mills during the week following Easter

Wages paid in the Belgian cotton industry have not been modified since our last report

The following is the original report in French —

La situation de l industrie cotonniere belge reste peu satisfaisante Des statistiques publiees par le Ministere des Finances, il ressort que la Belgique a exporte en 1932 moins de 21 millions de kilos de tissus de coton Il y a lieu de noter que ces exportations etaient de 31 millions de kilos en 1931 et de 44 millions de kilos en 1929

Cette regression dans les exportations explique le ralentissement important de l'activite des usines cotonnieres belges En filature, 10 pour cent des broches sont arrêtees pour un temps indetermine et les broches restantes travaillent a quelque 60 pour cent de leur capacite normale de production Malgre ce chômage, les stocks de files tendent a augmenter et les prix de vente s'en ressentent

Comme suite a la resolution adoptee par le Comite International Cotonnier, les filateurs affilies a l Association Cotonniere de Belgique ont decide de chômer pendant la semaine du 17 au 22 avril

Le degre d'activite des tissages est comparable a celui des filatures Les tisseurs de la region de Gand ont egalement pris la resolution d arrêter leurs usines pendant la semaine suivant Pâques

Les salaires payes dans l'industrie cotonniere belge n'ont pas ete modifies depuis l'envoi de notre dernier rapport

(Societe Cooperative Association Cotonniere de Belgique)

CHINA.

It is reported by the U S Department of Commerce that, with regard to the spinning industry at Shanghai, Chinese mills continue to operate about 90 per cent and Japanese 80 per cent of capacity Sales of yarn during February showed a significant increase over last month, but not sufficient to prevent a further increase in stocks The Chinese cotton market was firm due to small arrivals and strengthening tendencies in American and Indian cotton quotations Imports of American cotton in Shanghai in February were 58,000 bales of 500 lbs The military situation in North China has reflected itself in reduced mill operations and in the yarn market at Tsingtao as a result of the anti Japanese sentiment Most of the spindles at that place are owned by Japanese Yarn stocks there were reported accumulating

ENGLAND.

SPINNING SECTION

The ballot of the cotton spinning firms for the moderate proposal to curtail production by closing during the week beginning April 10 failed to obtain the 80 per cent in favour that was specified The voting for the proposal was 66 88 per cent, against 13 53 per cent, no replies 19 59 per cent In the Egyptian section those in favour were 62 99 per cent, whereas the American section showed 70 91 per cent The Federation recommended, however, a voluntary stoppage, and this is being largely followed and the Easter holiday is being extended

FRANCE.

In the spinning section an improvement manifested itself in December and January, bringing in its train a certain reduction of stocks Since then, however, the demand has not been maintained and prices have been considerably reduced

The situation in the weaving section still remains indifferent At the end of the last month the activity of the mills was estimated to be about 65 per cent of full time production, taking into account the establishments completely stopped

There have been no changes in wages since the last report published in the INTERNATIONAL COTTON BULLETIN

The following is the original text in French —

En filature une amelioration s'etait manifestee en decembre et janvier, entraînant une certaine diminution des stocks Depuis lors la demande s'est ralentie et les prix redeviennent franchement mauvais En tissage la situation reste tres mediocre Au cours de ces derniers mois l'activite des usines pouvait être evaluee a peu pres a 65 pour cente, compte tenu des usines completement arrêtees

Il ne s'est produit aucune modification de salaires depuis la publication du dernier Bulletin

FOREIGN COMMERCE
COMMERCE EXTERIEUR

	Annees *Years* 1931	1932
A Importations *Imports*		
1 Fils de coton *Cotton Yarn*	21 619	7 025
2 Tissus de coton et autres articles manufactures *Cotton cloth and other manufactured articles*	31 600	14 879
B—Exportations *Exports*		
1 Fils de coton exportations totales *Cotton yarn total exports*	86 617	74 301
Destinations *Destinations*		
Algerie Colonies françaises et pays de protectorat *Algeria French Colonies and protectorate countries*	9 611	11 576
Marches etrangers *Foreign markets*	77 006	62 725
2 Tissus de coton et autres articles manufactures exportations totales *Cotton cloth and other manufactured articles total exports*	431 405	389 447
Destinations *Destinations*		
Algerie Colonies françaises et pays de protectorat *Algeria French Colonies and protectorate countries*	288 005	291 441
Marches etrangers *Foreign market*	143 400	98 006

(*Syndicat General de l'Industrie Cotonniere Française*)

GERMANY.

SPINNING SECTION

During the first quarter of 1933 the unsatisfactory situation in the German cotton-spinning industry has shown no alteration The degree of activity remains extraordinarily quiet, as heretofore In March there was a passing improvement in various districts, which, with the closing of the American Exchanges and the resulting rise in cotton prices, caused considerable uncertainty The degree of occupation for the quarter under review remains as before Prices have, however, gone from bad to worse

It should be remarked that during this quarter an agreement has been arrived at between the employers' and the operatives' organizations by means of which wages have been stabilized at the present rate until January, 1934

WEAVING SECTION

No important alteration took place in the South German weaving section during the first quarter of 1933, compared with the last quarter of 1932 Customers delayed the distribution of their usual seasonal orders until the middle of March Only in the middle of that month were the larger orders received by the cotton manufacturers for the following months, with the result that at the end of the quarter the order books were in about the same condition as last December, and the degree of activity was the same as at the end of that period

Prices are still unsatisfactory

The following is the original text in German —

Auch im I Quartal des Jahres 1933 hat die unbefriedigende Lage der deutschen Baumwollspinnerei keine Aenderung erfahren Die Geschaftstatigkeit blieb nach wie vor ausserordentlich ruhig Im Marz machte sich vorubergehend in einzelnen Bezirken eine gewisse Belebung der Nachfrage bemerkbar die mit der Schliessung der amerikanischen Borsen und der damit erwarteten Steigerung der Baumwollkurse im Zusammenhang stehen durfte

Der Beschaftigungsgrad hielt sich wahrend des Berichts Quartals durchweg auf dem gleichen Stand wie vorher Die Preise haben dagenen eine weitere Verschlecterung erfahren

Bemerkenswert ist, dass im Berichts Quartal ein Abkommen zwischen den Arbeitgeber und Arbeitnehmer Organisationen abgeschlossen wurde, durch das die Lohne auf dem jetzigen Stand bis Januar 1934 stabilisiert werden

(*Arbeitsausschuss der Deutschen Baumwollspinnerverbande*)

Im Verlaufe des 1 Quartals 1933 ist gegenuber dem letzten Vierteljahr 1932 eine wesentliche Aenderung in der Lage der suddeutschen Baumwollweberei nicht eingetreten Die Abnehmerschaft ubte bis Mitte Marz weiterhin in der Erteilung langfristiger Auftrage weitgehende Zuruckhaltung Erst ab Mitte Marz kamen in der Baumwollweberei grossere Abschlusse fur die folgenden Monate zustande, sodass der Ende des 1 Quartals 1933 vorliegende Auftragsbestand sich ungefahr in der Hohe des Ende Dezember 1932 vorliegenden Auftragsbestandes bewegt und den Werken die Beschaftigung in dem bisherigen eingeschrankten Umfang auch fur die nachsten 2 Monate sichern durfte

Die Gewebepreise sind nach wie vor unzulanglich und unbefriedigend

(*Verein Suddeutscher Baumwollindustrieller*)

HOLLAND.

Conditions in the spinning section remain very unsatisfactory Most mills are working short time, as the demand for yarns remains small, and, owing to the very severe competition, prices are very low indeed

The manufacturers seem to be doing badly too A large number of looms is stopped, especially in the weaving sheds that used to work for export In the home trade there are too many firms competing for the available orders Prices are therefore very poor, and it seems that everybody handling either cotton, cotton yarn or cotton goods is losing money The export trade in cotton goods is drying up, partly owing to the competition of the Asiatic countries, and, further, on account of trade restrictions and competition from countries where the cost of living is lower than in Holland

ITALY.

The cotton industry in Italy has continued the improvement during the first quarter of 1933 which was recorded in the latter months of 1932. This is owing to a certain liveliness in the home market.

Prices, however, remain rather low.

Employment and salaries have not altered in any noteworthy manner.

On the 31st January the situation with regard to exports was as follows :—

	Quintals of Luas 1932	1933
Yarns	21,930	21,949
Fabrics	27,893	33,876
Total	49,832	55,825

The following is the original report :—

I cotonifici italiani hanno mantenuto, durante il 1° trimestre di quest'anno, il miglioramento di attività verificatosi negli ultimi mesi del 1932 in seguito a un certo risveglio della domanda sul mercato interno.

I prezzi restano però, sempre molto bassi

L'occupazione operaia ed i salari non presentano variazioni degne di nota

Al 31 gennaio la situazione delle esportazioni era la seguente :—

	1932	1933
Filati Q li	21,930	21,949
Tessuti Q li	27,893	33,876
Totale Q li	49,823	55,825

(*Associazione Italiana Fascista degli Industriali Cotonieri*)

JAPAN.

The U.S. Department of Commerce report that the Japanese cotton spinning and weaving industry had a very favourable year in 1932. The mills were said to have made large profits from purchases of raw cotton prior to the imposition of the gold export embargo in December, 1931. The exchange situation was favourable to export trade, 1932 shipments of both cotton yarn and textiles showing substantial increases over previous years.

Notwithstanding restrictions in spinning activity, amounting to about 30.4 per cent. of capacity in the first nine months of the year and to 35.7 per cent. in the last quarter, production of cotton yarn by member mills of the Japan Cotton Spinners' Association (representing about 99 per cent. of the total cotton spindlage in the entire country) established a new record of 2,809,115 bales of 400 lbs. each. The 1932 figure is only slightly larger than the previous high of 2,792,586 bales in 1929, but is considerably in excess of the 1931 output of 2,572,100 bales.

The seeming paradox of increased production, despite a curtailment of about one-third in spinning activity, is explained by the installation of new spindles during 1932. Figures as to the total number of spindles in place are not available in the Textile Division, but the average number of active spindles for the first ten months of 1932 amounted to 6,273,000 spindles compared with 5,879,000 in the corresponding 1931 period. The restriction in activity in 1931 was slightly less than in 1932.

Production of cotton cloth by member mills of the Japan Cotton Spinners' Association also attained a new high of 1,658,103,000 yards, a gain of 18 per cent over the 1931 output of 1,404,668,000 yards and substantially in excess of the previous record of 1,538,249,000 yards established in 1929. In weaving, the association mills account for only a portion of the total production, and no information is available as to the yardage output of the independent mills. Member mills of the Japan Cotton Spinners' Association own somewhat less than half of the wide power looms in the country. These looms generally work for the export trade as domestic consumption of cotton cloth is confined largely to goods up to 15 inches in width.

Exports of cotton yarn as reported by the Japan Cotton Merchants Union of Osaka totalled 89,470 bales, or 35,788,000 lbs in 1932, almost treble the 1931 shipments of 31,441 bales, or 12,576,000 lbs. Stocks of cotton yarn in public warehouses and customs sheds at Tokyo, Nagoya, Kobe, and Osaka at the end of the year amounted to 24,029 bales, or 9,611,600 lbs, a considerable decline from the 1932 peak of 43,207 bales or 17,282,800 lbs. The December 31, 1932, figure, however, was more than 50 per cent larger than the total of 15,563 bales, or 6,225,200 lbs., reported at the end of 1931.

Japanese exports of cotton cloth for the first time in the history of the Japanese industry exceeded 2,000,000,000 square yards. The shipments in 1932 aggregated 2,031,722,000 square yards, valued at 288,712,833 yen, compared with 1,413,780,000 square yards, valued at 198,731,572 yen, in 1931. The previous high record was established in 1929 when 1,790,560,000 square yards valued at 412,706,729 yen were exported. The lower valuation in 1932 reflects the price decline since 1929. The following comparison of shipments to the principal markets will show trade trends during 1932 —

	1931 Square yards	1932 Square yards
British India	404 411,000	644 685 000
Netherland India	212 107,000	352 234 000
Egypt	103 799 000	195 435 000
China	230 445,000	193 623 000
Kwangtung Leased Territory	37 934 000	88 838 000
Straits Settlements	41 305 000	82 228 000
Turkey	25 150 000	41 529 000
South Africa	39 033 000	36 316 000
Australia	20 939 000	35 992 000
Siam	5 984 000	24 458 000
Hong Kong	63 450 000	23 406 000
Argentina	10 [illegible]40 000	22 461 000
Philippine Islands	3 423 000	21 410 000

Stocks of cotton fabrics in public warehouses and customs sheds at Tokyo, Nagoya, Kobe, and Osaka totalled 54,408 bales on December 31, 1932, compared with 122,375 bales at the end of 1931 and 144,899 bales, the year's high on May 31, 1932.

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[*] According to the figures transmitted by the Japanese Association in January last, 7,965,000 spindles were in place on that date.

A declining tendency is becoming evident in the Japanese cotton industry, according to a radiogram, dated February 28, from the commercial attache's office, Tokyo Owing to increased production costs, prices of cotton piece goods recently were revised upward As a consequence, sales to India appear to be declining The Chinese boycott of Japanese goods, which had weakened under the influence of low Japanese quotations, seems to have become more effective since the price advance Furthermore, accumulating stocks of cotton yarn may lead spinners further to curtail production

According to a cablegram received at the offices of the International Cotton Federation the present degree of occupation of full time is 80 per cent

PORTUGAL.

An unofficial report states that deliveries of raw cotton to mills in December were said to be the largest for any one month since last May The mills are reported to have sufficient orders on hand to insure operations for the next six months and orders are still being received from the colonial markets

SPAIN.

The commentary on the activities of a cotton industry such as that of Spain during the first quarter of 1933—a period in which no special events have been recorded, either against or in favour of the industry—cannot be extensive or greatly interesting The narrator, therefore must of necessity refer to the last report published, in which were established comparisons based on a much longer period, and which gave the truth of the situation at the end of the year 1932

With relatively small exceptions, the situation of the industry remains the same as it was three months ago, and as has been remarked, during this time there have been no important strikes, nor have the conditions of labour altered Both as regards the spinning section and the weaving section the labour situation is composed of the same elements However, the interior market has awakened from its lassitude, and as regards the international market, exports are suffering the consequences of the general world economic depression, their amount having diminished in proproportion

From the foregoing observations it will be understood that, as regards basic figures, the former percentages still apply, that is to say, production taken on the whole (spinning and weaving), and on the average, can be considered stationary, with a reduction of 10 per cent below normal, exports being reduced by some 15 per cent in comparison with the corresponding period of last year

Hours of labour, salaries and wages, as well as the regulations concerning work, remain the same as last year

The internal political situation, however, shows variations, and for the most part the crisis in the cotton industry is due more to the international situation than to local conditions, its effects being reflected rather than inherent

(Associacion de Fabricantes de Hilados y Tejidos de Algodon en la Camera, Barcelona)

VENEZUELA.

A communication from the U S Department of Commerce states that despite increased import duties on cotton yarn and cotton goods there was no appreciable expansion in the activity of the cotton mills during 1932 although the production of yarn increased somewhat Business conditions in 1932 were not favourable and most of the local manufacturers are not very optimistic as to the outlook for the immediate future It is said that the demand for cotton goods is considerably smaller than in recent years owing to the low purchasing power of the consuming classes

The import duty on raw cotton was increased from 0 39 bolivars per gross kilo (2 8 cents per lb) to 1 95 bolivars per kilo (14 2 cents per lb), representing an increase of about 400 per cent While accurate figures in cotton production in Venezuela are not available it is estimated to average about 12 000 bales of 500 lbs annually

As a consequence of the increased duties on cotton yarn imports have practically ceased but some cotton cloth was imported in spite of the duties

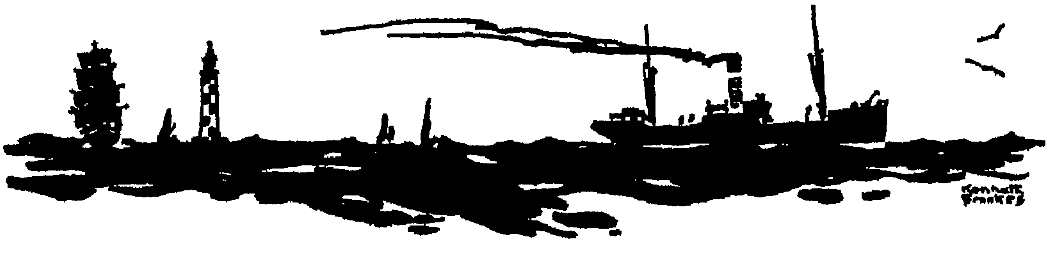
ECUADOR.

Ecuadorian textile factories had a prosperous year in 1932 and worked day and night shifts to meet the demands of the domestic and Colombian markets Several of the mills are reported to be increasing their equipment, purchasing machinery in Germany and England New varieties of cotton fabrics were made for the trade of the coastal region where lighter weight fabrics are desired Such goods formerly were supplied almost exclusively by imports The competition of the domestic mills has made itself felt especially in sheetings, coloured drills and prints The Ecuadorian textile factories produce both cotton and woollen goods, but the expansion has been in cotton fabrics and yarn *U S D C*

FINLAND.

The total value of the output of the Finnish textile industries in 1932 is estimated to have increased by 4 per cent, entirely owing to higher prices, by 5 per cent (of commodity prices) As a result of heavy protection the textile industries did very well in 1932, and the profits were considerable

(Extract from " Economic Situation in Finland," published by Department of Overseas Trade)



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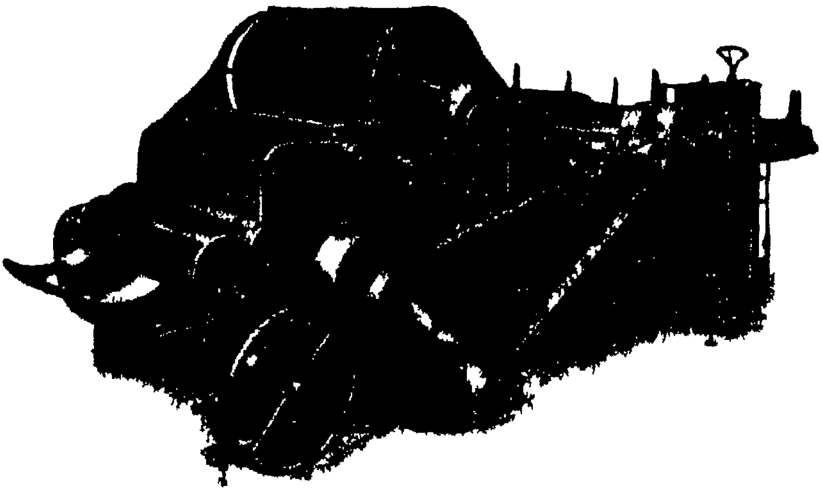

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COTTON GROWING

ALGERIA.

The crop, which was already smaller as a result of the reduction in area, has been greatly reduced and injured by *earias*, and particularly by pink boll-worm, so that its total volume is extremely small; torrential rains and strong winds have, moreover, hindered picking.

ARGENTINA.

The 1930-31 crop amounted to 138,000 bales of 478 lbs., according to final official figures. The ginning outturn for that season was 28 per cent., which is a very low proportion of fibre to seed. In the U.S.A., the ginning outturn is usually about 33 per cent of fibre. There were 79 ginneries, of which 66 were working in 1931. (*U.S.D.C.*)

EXPORTS OF COTTON, ELEVEN MONTHS ENDING JAN., 1933 & 1932.
(Bales)

	March, 1932/33	January same period, 1931/32
Bunge & Born	69,748	50,039
Louis Dreyfus	48,712	44,981
M. Comero y Cia	9,780	6,841
Comm. Belgo Argen	6,529	1,434
Rius y Jorba	3,639	1,852
E Arguindegui	248	314
Various	—	21,323
Total bales	138,656	126,784

BRAZIL.

The 1932 cotton crop of northern Brazil is late in maturing, according to official reports. Therefore picking was likewise late and transporting of cotton to the coast delayed. As a result of the drought and insect damage the earlier estimates for most of the states of northern Brazil are being scaled down. The current estimate of the five principal states being 230,000 equivalent 500-lb. bales, compared with 307,000 bales in 1931 for the same states.

As a result of political disturbances in southern Brazil shipments from Pernambuco to São Paulo were unusually small. Ordinarily, southern Brazil is the largest market for the cotton of the north-eastern states, São Paulo alone taking about 30 per cent. of the total shipments.

Usually about 20 per cent of the production of northern Brazil is consumed by the local mills about half is shipped to southern Brazil, and the rest exported to foreign countries

As a result of the reduced Brazilian crop and a depreciation of stocks in São Paulo during recent disturbances in that state prices showed a considerable increase Inasmuch as the statistical position of the Brazilian cotton is strong it is believed by local merchants that the price level is likely to be maintained *U S D C*

The Brazilian Ministry of Agriculture published an estimate of the 1932 33 crop which places it at about 75 000 metric tons equivalent to 347 000 bales of 478 lbs net This represents a drop of about 40 per cent from the crop of 1931 32 The sharp decline is ascribed mainly to the drought in the northern states as well as to insect damage

The crop report issued is printed below

According to information received by the Directorate of Textile Plants the estimate of the cotton crop for the 1932 33 season is as follows —

State	Hectares	Raw Cotton (Kilos)
Para	22 000	1 800 000
Maranhao	33 330	7 682 800
Piauhy	17 850	1 534 480
Ceara	50 000	3 000 000
R G do Norte	55 000	5 500 000
Parahyba	85 000	9 000 000
Pernambuca	120 000	9 000 000
Alagoas	53 07	6 192 120
Sergipe	63 220	880 950
Bahia	25 000	3 500 000
Rio de Janeiro	1 280	645 000
Minas Geraes	30 650	5 600 000
Sao Paulo	95 240	21 132 000
	651 545	75 367 350

The decrease in cotton production during this year has been chiefly due to the abnormal climatic conditions in the North East and to attacks of insects and disease, in some states it is estimated that nearly half the producing lands have been abandoned Similar low production occured in the years 1915/16 and 1916 17, when the totals were somewhat less than in the present year

---

The 1932 cotton crop of São Paulo is estimated at about 21 000 metric tons of about 4½ bales each This compares with 10,000 tons for 1931 and 4,000 tons for 1930

Local officials state that the quality of the São Paulo cotton has improved considerably in recent years It is said that about 35 per cent of the present crop is 28 mm and over

BELGIAN CONGO.

The Compagnie Cotonnière Congolaise and its two subsidiaries in the Belgian Congo, the Société Cotonnière du Népoko and the Société Cotonnière du Bomokandi, were responsible for an output of cotton during 1932 of 6,500 tons, which is less than 45 per cent. of that of 1931 (14,600 tons). Various factors have contributed to this reduction, viz., temporary suspension of cultivation in certain districts far removed from the river ports, lack of official propaganda, damage caused by insects, and late sowing in the Southern districts. The 1933 output will benefit from the re-opening, at the request of the Government, of the Uele and Maniema zones, and from the development of cultivation in the Ubangi and certain other districts. Towards the end of the third quarter of 1932 prices reached a level not touched since 1848. For the 1933 crop the Government of the colony will again provide temporary aid in the form of an advance of necessary funds. In consequence of sales under unfavourable conditions, the profit and loss account of the said company (Cie Cotonnière Congolaise) for 1931 could only be balanced by calling upon a special reserve of 25,000,000 frs. The balance-sheet, however, still shows the loss brought forward from 1930, namely 12,982,000 frs.

CHINA.

Based on reports from the eleven provinces of Hopei, Shantung, Shansi, Honan, Shensi, Hupeh, Hunan, Kiangsi, Anhwei, Kiangsu and Chekiang, the China Cotton Statistics Association has published a second estimate of this year's cotton crop. It is shown that the total area under cotton in these provinces aggregates 37,079,835 mow, while the crop is estimated at 8,094,863 piculs. The following table (*Chinese Economic Bulletin*) shows the planted area and yield for the past 13 years:—

		Area (Mow)	Yield (Piculs)
1919		33,037,881	9,028,390
1920		28,327,297	6,750,403
1921		28,216,168	5,429,220
1922		33,464,595	8,310,355
1923		29.554,053	7,144,642
1924		28,771,577	7,808,882
1925		28,121,027	7,534,351
1926		27,349,727	6,243,585
1927		27,610,276	6,722,108
1928		31,926,311	8,839,274
1929		33,811,255	7,587,021
1930		37,593,012	8,809,567
1931	(Preliminary estimate)	35,468,352	6,793,241
1931	(Second estimate)	34,182,747	6,460,641
1931	(Actual)	31,637,779	5,399,780
1932	(Preliminary estimate)	37,086,775	10,829,162
1932	(Second estimate)	37,079,835	8,094,863

In the Yellow River valley, where cotton has suffered from drought in past years, there was sufficient rainfall in the early part of the year, while in the southern provinces conditions were fairly good, despite some cold weather. Consequently the preliminary estimate put the crop at 10,829,162 piculs, a figure unprecedented in recent years, but after publication of this report conditions became less favourable. The northern crop suffered from excessive rainfall and early frost, and considerable areas in Hopei, Shantung and Shansi were inundated. In the Southern provinces the dry spell during August and September had a damaging effect on the growing crop, and with the exception of Kiangsu, the outlook in cotton crop, and with the exception of Kiangsu, the outlook in all cotton-growing provinces was not so good as at the time of making the preliminary estimate. The second forecast shows an anticipated decrease of 2,734,299 piculs, nearly 25 per cent., as compared with the preliminary figures, and moreover the cotton grown is poorer in quality than in previous years.

The Chinese Cotton Statistics Association, Shanghai, published on March 10, 1933, the final revised estimate of cotton crop in China for 1932 as follows: Area, 37,099,800 mow; yield, 8,105,637 piculs.

The above figures were based on the detailed reports received from the eleven provinces of Hopeh, Shantung, Shansi Honan, Shensi, Hupeh, Hunan, Kiangsi, Anhwei, Kiangsu and Chekiang.

For the sake of comparison the two previous cotton estimates for 1932 as well as the final revised estimate for the last two years are given below·—

	Area (in mow)	Yield (in piculs)
Final estimate 1932	37,099,800	8,105,637
Second estimate 1932 . .	37,079,835	8,094,863
First estimate 1932	37,086,775	10,829,162
Final estimate 1931 . ..	31,637,779	6,399,780

The following shows the final area and yield of cotton for the last two years in each of the eleven provinces:—

	Final Estimate 1932		Final Estimate 1931	
	Area (mow)	Yield (piculs)	Area (mow)	Yield (piculs)
Liaoling	—	—	1,142,430	177,680
Hopeh . ..	5,143,195	1,282,929	2,953,000	844,000
Shantung . ..	6,844,166	1,769,394	7,971,094	2,154,882
Shansi	301,950	53,921	318,877	81,728
Honan .. .	3,424,140	596,755	2,880,410	644,544
Shensi	1,412,664	157,813	1,638,800	346,319
Hupeh	7,626,650	1,634 350	4,284,260	1,037,002
Hunan	982,685	199,764	266,450	45,292
Kiangse	222,688	45,822	46,127	8,920
Anhwei	955,050	169,478	462,900	43,050
Kiangsu	8,514,837	1,778,247	7,656,244	626,480
Chekiang	1,671,775	417,164	1,984,187	389,883
Total	37,099,800	8,105,637	31,637,779	6,399,780

CHOSEN.

A preliminary estimate of the cotton crop for 1932 places it at 133,000 bales, compared with 100,000 bales for 1931, according to official reports. While the estimate is larger than for 1931 the area planted was less than last year, the larger production being anticipated from a better yield as a result of the more favourable conditions. (*U.S.D.C.*)

FRENCH EQUATORIAL AFRICA.

Production of lint in 1933 (1933-34) is estimated at 66,000 centals (13,800 bales), a decrease of 21 per cent on that of last year, which was 83,600 (17,500) but an increase of 520 per cent on the average of the five years ending 1931, which was 10,700 (2,200).

FRENCH INDO-CHINA.

Growth was good at the end of November in Cambodia.

FRENCH MOROCCO.

The last crop was small in consequence of the small area planted and in spite of normal unit-yields but the fibre was good.

The cultivation of large areas in the north of Morocco leads to expectations of a fairly considerable extension of the crop in the next few years and perhaps in 1933-34.

HAITI.

Exports of cotton for the first three months of the fiscal year (October, November and December, 1932) amounted to 10,982 kilos of about 2.2 lbs. each against 80,288 kilos exported for the corresponding three months of 1931.

The present crop is expected to be above the average. There is said to have been no increase in acreage planted to long-staple cotton, and the exports of long staple are expected to be about 200 bales.

MANCHURIA.

The Manchukuo Government is reported to have set aside 2,500 acres of rich land in Manchuria province, formerly owned by the Government of Marshal Chang Hsiao-liang, to be distributed in small plots to farmers willing to grow cotton. A survey has revealed that Manchuria consumes 30,000,000 catties (a catty is 1⅓ lbs.) of raw cotton annually, whereas the maximum production in any year was 20,000,000 catties.

MEXICO.

As a result of the ample rains and abundant irrigation water, more land may be planted to cotton in the Laguna district for the 1933 crop, according to local growers. However, the extent of the area is contingent upon the loans which planters may be able to obtain for financing crop production. The 1932 crop of the Laguna district amounted to about 60,000 bales and is said to have been

U.S.D.C. = United States Department of Commerce.

entirely disposed of to local mills with the exception of some 10 000 to 15,000 bales carried over into 1933 The 4,500 bales exported in 1932 are said to have been from the 1931 crop

The territorial government of Lower California entered into a contract with two land companies to plant about 27,000 acres to cotton during 1932 From this area about 12,000 bales were said to have been produced and about 1,500 bales are estimated to have been produced by independent growers A new contract similar to the one mentioned above, is said to have been made for the 1933 crop, providing for the planting of about 40,000 acres

(*U S D C*)

NIGERIA.

According to a personal estimate of the Director of Agriculture, Nigeria, a crop of about 80,000 centals (17 000 American bales) of American seed cotton should be exported in the current season 1932 33, representing about 400 per cent of the last year's crop and 90 per cent of the average for the previous quinquennium This estimate is very rough and is based on the area sown, the crop condition and world prices of cotton at the time when it was made, at that time it was understood that if prices fell between then and the buying season the estimated crop would not be reached, while, in the case of a rise in prices, it would even be exceeded

The revised estimate of the total crop in 1931 32 was 24,592 centals (5,144 bales) of which American seed cotton made up 19,244 (4,026), Native cotton 16 (3) and Improved Ishan cotton 5,332 (1,115) The progressive disappearance of the native varieties, which are being replaced by Improved Ishan is noteworthy

PERU.

Exports of cotton from Peru during January amounted to 3,184 bales or the same as during January, 1932 according to official figures Total exports for the six months August to January, aggregated 97 000 bales against 84,000 bales for the corresponding six months of 1931 32

A plentiful supply of water in the northern valleys during the early part of the season indicates a fair cotton crop which, Lima merchants believe, may be about 1,000,000 Spanish quintals or about 210,000 bales of 500 lbs (*U S D C*)

ST. VINCENT (BRITISH WEST INDIES)

At the end of December the cotton crop looked normally well but too much rain had been experienced for its general wellbeing Stainers had made their appearance On the date mentioned exact figures as to area were not to hand but it was estimated that it would be something in the vicinity of 600 acres, i e , only a third of the previous year's acreage Cotton pods were just beginning to open

SUDAN.

The following is the official crop report for February of the Department of Agriculture and Forests of the Sudan Government —

Variety	Area under Crop Feds	Picked to date kantars of 315 rottles	Estimated total yield kantars of 315 rottles
Gezira Sakel (Syndicate)	175 792	185 261	400 000
(K C C)	19 183	23 243	
Tokar Sakel	40 000	5 396	60 000
Kassala Sakel	19 147	12 000	28 000
Dueim Sakel	425	1 405	2 000
Private Estates Sakel	3 531	4 724	11 958
Total Sakel	258 078	232 029	501 958
Irrigated American	11 435	37 848	40 830
Rain Grown American	43 225	31 964	34 047

UGANDA

A further report has been received from H M Trade Commissioner in East Africa respecting the Uganda cotton crop, in which it is stated that, allowing for the storm damage previously mentioned H M Trade Commissioner is officially informed that the crop will amount to approximately 260,000 bales

He adds that the price of cotton has fallen considerably since August last and the average price likely to be paid to the natives for their seed cotton this season will be about Shs 8/50 per 100 lbs , which, on the crop mentioned above, will give a money return to the growers in the neighbourhood of £1,480,000, against approximately £1,397,000 in the preceding year

With reference to the export duty on ginned cotton exported from Uganda, based upon the official closing price for July American ‘ middling ’’ futures Liverpool on certain specified dates, it should be noted that an Order made by the Governor in Council on December 14, 1932, provides that when such price falls between 4 51d and 5 25d per lb the duty shall be 1 cent per lb

Arising from the above mentioned Order, a Government notification dated January 26, 1933, intimates that the amount of tax payable in respect of ginned cotton exported from Uganda during 1933 will be 1 cent per lb

In December conditions favourable to maturation were generally maintained and in mid January there appeared to be no grounds for any substantial revision of the previous crop estimate

UNION OF SOUTH AFRICA.

Crop condition was poor, due chiefly to continuous drought

The area under cotton in 1931-32 was considerably reduced on account of the low prices prevailing at planting time, aggravated by the prospect of heavy losses on exchange, giving little hope of the crop being a paying proposition unless of very good quality Production was further affected through a large proportion of the lower grade cotton not being picked

Weather generally was not favourable Except for two or three districts, planting rains were late and the precipitation was very small and badly distributed throughout the growing season, drought, which, together with intense heat, caused considerable damage, being reported in some districts

A notable feature was the absence of insect pests, only isolated districts reporting damage which was practically confined to irrigated lands except in the Orange River area

Owing to the continued low prices prospects of a larger crop in 1932-33 are poor and it is generally anticipated that the area will be lower than last season Farmers are still, however, very interested in cotton and, with an improvement in prices, it is considered that the area would be considerably increased throughout the country

U.S.S.R.

An outstanding feature of the 1933 Russian cotton plan is the abandonment of efforts towards a further large expansion in the acreage The 1933 plan provides for total plantings of 2,067,000 hectares, or 5,100,000 acres, which means a reduction of 12 per cent compared with the area of 5,800,000 acres previously reported as planted in 1932 Those figures point to the probability that the 1932 acreage was smaller than hitherto reported, and that a down ward revision in the estimate of the planted acreage will eventually be made

The total planned output of unginned cotton in 1933 is 1,430,000 tons, or 2,050,000 to 2,175,000 bales (of 478 lbs) of ginned cotton, depending upon the ginning yield assumed According to the Chairman of the State Planning Committee (Gosplan) in his report to the Executive Committee, the plan provides for an increase of 5 5 per cent in production over the output in 1932 On the basis of these calculations, it appears that the 1932 crop is now assumed to have amounted to about 1,950,000 to 2,050,000 bales (depending upon the ginning yield or percentage of lint) compared with 2,100,000 bales mentioned by the Soviet press and 1,900,000 to 2,000,000 bales as estimated by this Bureau in September

(*U S D A*)

According to the figures of the State Planning Commission, the cotton industry is to consume in 1937 about 1,000,000 tons of raw material, among others 15 per cent of cottonine This would mean an increase in consumption of cotton goods by two and a half times According to figures of the People's Commissariat of Agriculture, the supply of cotton fibre is to increase as follows In 1932 520,500 tons of cotton are to be harvested in 1933, 583,000 tons, in 1934, 658,200 tons, in 1935, 758,600 tons, in 1936, 892,200 tons, and in 1937, 1,065,000 tons However, during the first nine months of each year cotton of the preceding year is being used in factories, and only during the last three months of each year new cotton is being worked Besides, other industries require a certain amount of cotton for their needs, and this amount reaches sometimes as much as 20 per cent of the whole crop This means that a crop of 1,065,000 tons would not suffice to cover the requirements. It is, therefore, of great importance to raise the yield of cotton, through the use of selected seeds. Seeds of American and Egyptian cotton are to be widely used.

Cotton grown out of selected seeds is of a much longer staple, which is of great importance for the cotton industry. The following table shows what results can be expected from an efficient handling of the selected seed system. The figures show the relative part of cotton of different staple to be expected in future crops:—

(In percentage)

Length of Fibre in mm.	1932	1935	1936	1937
29/30 and up	8·6	34·0	34·0	34·0
28/29	25·1	23·0	24·0	24·0
27/28	46·1	27·0	22·0	22·0
26/27	10·3	10·0	11·0	11·0
25/26	6·1	3·5	6·5	6·5
24/25	0.4	1·5	2·5	2·5

Such improved cotton staple will add considerably to the tonnage of cotton crops, bringing it up to not less than 1,100,000 tons in 1937, which would make possible the planned increase of consumption by 2.5 times. Improved methods of spinning require also a longer-staple cotton. Artificial silk also is to play an ever-increasing rôle in the production of fabrics.

According to consular reports based primarily on Soviet publications, the cotton crop of 1931 amounted to about 1,850,000 equivalent 500-lb. bales. Preliminary estimates for 1932 place the figures at about 2,500,000 bales. The United States Bureau of Agricultural Economics states that the production of 1932 is more likely to be between 1,900,000 bales and 2,000,000 bales. According to a report based upon Soviet publications, ginnings up to October 5 amounted to about 1,400,000 equivalent 500-lb. bales, compared with 1,100,000 bales ginned up to the same date of 1931. It is reported that a considerable quantity of immature cotton was picked under pressure of all sorts of representatives who visited the farm in order to urge exceeding the cotton harvest plan for September 1932 *(U. S. D. C.)*

Exports of cotton for the first nine months of 1932 amounted to 7,506 equivalent bales of 500 lbs., according to the Soviet press. This represents a sharp decline from the exports during the first nine months of 1931, totalling 100,000 bales. The total exports for the calendar year 1931 amounted to 176,000 bales, of which 158,000 bales were exported to Great Britain, 7,500 bales to Latvia, 6,000 bales to Italy, 2,800 bales to Esthonia, 2,000 bales to Belgium, and 130 bales to Greece. The total value of the cotton exported in 1931 amounted to 18,005,000 roubles (1 rouble is about 51 cents at par).

Cotton imports for the first nine months of 1932 amounted to 91,000 bales, or less than half of the imports during the first nine months of 1931, amounting to 203,000 bales. Total imports for the calendar year 1931 aggregated 236,000 bales, valued at 40,568,000 roubles.

The tariff of 1930 placed the import duty on American and Egyptian cotton at 20 per cent *ad valorem*, leaving cotton coming over the Asiatic frontiers on the free list

THE WORLD'S COTTON SUPPLY.

In the current issue of the *Empire Cotton Growing Review*, Mr J A Todd, in the course of an article on the World Cotton Supplies, states —

"The only question remaining is whether, when normal conditions return, America will be any better able to supply the world's needs, and to keep on supplying the increasing need, than she was before the war, and a negative answer can be given to that question without any hesitation There has been no change in the fundamental conditions ruling the American crop, except for the worse A great deal of additional land has been brought under cotton cultivation in the extreme west since 1914, but the general conditions under which the crop is grown have not improved America can still produce every now and then an almost miraculous bumper crop, but her average crop, tested by the yield per acre over five-yearly periods, is substantially lower than it was before the war, and the normal cost of production in the United States as a whole is probably higher than in any other major cotton growing country in the world, especially if the cost of production be taken in relation to the quality of the cotton Finally the quality of the American crop as a whole is much lower than it was before the war

Even during these terrible years of depression the total production of outside growths has held up remarkably well, in fact, but for an unfortunate succession of bad years in India, it would have shown very little reduction at all There is no conceivable reason why, after having stood such a test these countries should now give up the struggle and leave the world s cotton supplies again to the dominance of the American crop Outside growths now represent a really substantial and essential part of the world's supplies, and there is ample room not only for their return to the peak figures of 1928 and 1930, but for still further expansion The world's crops in 1932 were substantially less than they were in 1914

In the long struggle for the development of these outside growths the Empire has taken its full share The Indian crop plays a valuable part in preventing the price of American cotton going to extremes when the crop fails, because a large part of the consumption of the East can be switched over from American to Indian when relative prices make it worth while It is very desirable that India should recover the ground she has lost since her record crop of 1925, and should carry on the improvement in the quality of her crop as a whole which has been so marked since the war The recent completion of the Sukkur barrage should make it possible to advance still further both in quantity and quality Again, within the range of the outside growths themselves Empire cottons play an important part by providing alternative supplies and checking the tendency for any particular variety to go to extremes when supplies happen to be reduced—e g , Sudan Sakel against Egyptian, and East African against Peruvian "

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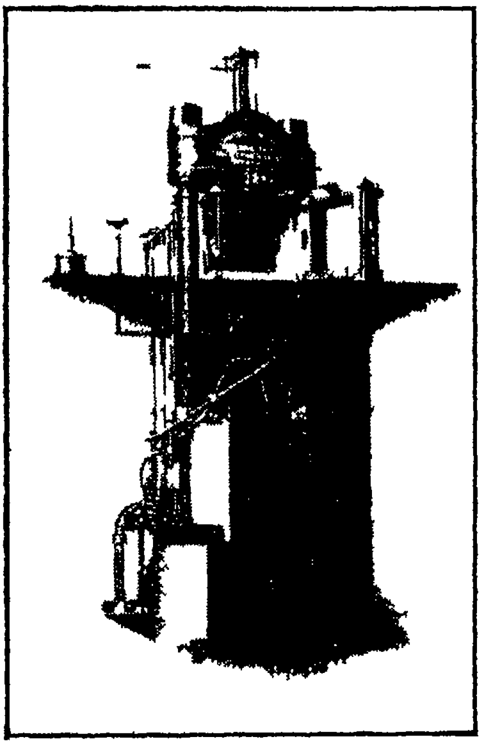

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WORLD'S COTTON ACRE-

COTONNIER—SUPERFICIE, PRODUCTION ET RENDEMENT PAR HA.

Table prepared by The International

o.	PAYS Countries	Superficie—*Area*				
		Moyenne *Average* 1923–24/ 1927–28	1928–29	1929–30	1930–31	1931–32
		hectares	hectares	hectares	hectares	hectares
	Europe					
1	Bulgaria	2,982	5,810	5,575	5,462	5,297
2	Spain	2,659	7,788	8,465	18,354	5,767
3	Greece	14,569	15,404	20,202	20,163	18,482
4	Italy	3,600	—	3,109	3,551	1,700
5	Malta	405	358	259	202	135
6	Yugo-slavia	647	602	977	1,306	747
	Total	25,000	32,000	39,000	49,000	32,000
7	U.S S R.	513,000	971,300	1,055,500	1,582,600	2,163,600
	North and Central America					
8	United States	17,139,512	18,349,049	18,531,969	18,247,877	16,468,050
9	Guadeloupe (2)	800	800	600	600	—
0	Guatemala	631	26	71	343	—
1	Haiti (2)	(3) 42,928	70,000	81,000	81,000	—
2	British West Indies	239	101	330	607	162
13	„ Barbadoes	1,017	21	110	1,151	589
4	„ Grenada (2)	1,600	1,600	1,600	1,600	—
5	„ Virgin Islands	24	—	12	20	—
16	„ Montserrat	1,150	1,050	1,620	1,651	1,386
17	„ St. Christopher and Nevis	1,400	788	1,200	2,000	1,380
18	„ St. Vincent	1,715	1,370	711	1,601	729
19	Mexico	162,049	203,243	198,938	157,944	129,122
20	Nicaragua (2)	—	—	—	—	—
21	Porto-Rico	3,220	—	—	—	—
22	Dominican Rep.	—	—	—	—	—
23	Salvador (2)	—	—	—	—	—
	Total	17,370,000	18,630,000	18,820,000	18,500,000	16,690,000
	South America					
24	Argentine	86,795	103,710	122,000	127,300	(4) 130,000
25	*Bolivia	2,185	—	—	—	—
26	Brazil	586,541	519,124	581,055	580,888	—
27	Colombia	(5) 22,103	13,702	—	—	—
28	Paraguay	(5) 12,517	9,109	11,071	13,810	11,630
29	Peru	119,462	114,630	126,879	—	—
30	*Venezuela	—	—	—	—	—
	Total	827,000	760,000	860,000	880,000	—
	Asia					
31	Ceylon	600	1,000	800	930	800
32	China (6)	1,737,600	1,961,553	2,077,364	2,309,715	1,043,825
33	Cyprus	4,129	4,474	4,490	8,557	4,536
34	Korea	188,065	203,681	184,682	191,281	190,956
35	French Possessions in India	150	50	187	202	190
36	British India	10,303,600	10,047,800	10,490,100	9,636,200	9,518,900
37	Dutch Indies (2)	(5) 8,874	8,531	9,897	8,696	6,730
	Indo China :					
38	Annam	6,540	5,700	7,000	9,160	8,000
39	Cambodge	(5) 5,580	7,480	7,077	6,843	—
40	Cochin China	409	500	400	600	—
41	Laos	1,400	1,680	1,680	1,500	1,000
42	Tonkin	1,580	1,822	1,482	1,465	997

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* Pays dont les chiffres ne sont pas compris dans les totaux.

(1) Moyenne de deux années. (2) Exportation de coton égrené et non égrené, exprimé en termes de coton égrené. (3) Moyenne de trois années. (4) Donnée approximative non officielle. (5) Moyenne de quatre années. (6) Estimations faites par l'Association de l'industrie cotonnière chinoise.

AGE AND PRODUCTION

COTTON—AREA, PRODUCTION AND YIELD PER HECTARE.

Institute of Agriculture, Rome.

PRODUCTION DE COTON ÉGRENÉ — *Production of lint*					RENDEMENT PAR HECTARE *Yield per hectare*					
Moyenne *Average* 1923–24/1927–28	1928–29	1929–30	1930–31	1931–32	Moyenne *Average* 1923–24/1927–28	1928–29	1929–30	1930–31	1931–32	No
quintaux *quintals*	quintaux *quintals*	quintaux *quintals*	quintaux *quintals*	quintaux *quintals*	quint. *quintals*	quint *quintals*	quint *quintals*	quint. *quintals*	quint. *quintals*	
4,510	6,968	9,083	8,133	10,630	1,5	1,3	1,6	1,5	2,0	1
3,986	6,914	10,141	16,111	8,000	1,5	0,9	1,2	0,9	1,4	2
30,478	32,252	33,096	35,015	29,642	2,1	2,1	1,6	1,7	1,6	3
1) 10,315	—	7,155	9,612	3,037	—	—	2,2	2,7	1,8	4
843	983	688	532	366	2,1	2,7	2,7	2,6	2,7	5
756	472	1,268	1,349	741	1,2	0,8	1,3	1,0	1,0	6
51,000	60,000	61,000	71,000	52,000	2,0	1,9	1,6	1,4	1,6	
1,413,600	2,545,000	2,773,000	3,446,000	3,997,000	2,6	2,6	2,6	2,2	1,8	7
30,703,327	31,390,492	32,142,819	30,206,071	37,066,154	1,8	1,7	1,7	1,7	2,3	8
240	186	32	75	0	—	—	—	—	—	9
1,901	52	80	795	—	3,0	2,0	1,1	2,3	—	10
42,504	47,546	51,246	41,725	—	—	—	—	—	—	11
267	317	374	577	136	1,1	3,1	1,1	1,0	0,8	12
998	7	115	1,528	332	1,0	0,3	1,0	1,3	0,6	13
1,586	1,496	1,654	1,204	—	—	—	—	—	—	14
3	—	4	—	—	0,1	—	0,3	—	—	15
1,882	2,032	3,294	3,346	1,816	1,6	1,9	2,0	2,0	1,3	16
1,432	1,408	3,430	3,279	1,457	1,0	1,8	2,9	1,7	1,1	17
2,126	1,197	1,190	2,745	935	1,2	0,9	1,7	1,7	1,3	18
481,878	603,760	533,438	384,868	448,770	3,0	3,0	2,7	2,4	3,5	19
915	0	1,469	1,082	—	—	—	—	—	—	20
3,068	2,895	(2) 1,662	(2) 4,646	(2) 7,403	0,9	—	—	—	—	21
1,077	165	—	339	96	—	—	—	—	—	22
6,650	470	490	—	—	—	—	—	—	—	23
31,250,000	32,052,000	32,741,000	30,653,000	37,570,000	1,8	1,7	1,7	1,7	2,3	
183,470	287,000	312,000	346,200	(4) 370,000	2,1	2,7	2,6	2,7	2,8	24
4,350	—	—	—	—	2,0	—	—	—	—	25
1,295,758	1,195,509	1,267,260	1,021,530	1,207,900	2,2	2,3	2,2	1,8	—	26
5) 34,952	20,600	—	—	—	(5) 1,6	1,5	—	—	—	27
(5) 6,264	27,327	35,984	40,000	34,230	(5) 2,1	3,0	3,0	3,0	3,0	28
189,346	486,820	655,910	518,710	489,490	4,1	4,2	5,2	—	—	29
5) 70,000	78,880	—	—	—	—	—	—	—	—	30
2,030,000	2,017,000	2,290,000	1,950,000	2,150,000	2,5	2,7	2,7	2,2	—	
350	866	690	—	—	0,6	0,4	0,9	—	—	31
4,286,500	5,343,606	4,586,582	5,325,648	3,868,859	2,5	2,7	2,2	2,3	2,0	32
5,272	3,895	6,387	8,670	5,197	1,3	0,9	1,4	1,0	1,1	33
276,131	324,964	301,254	323,867	218,858	1,5	1,6	1,6	1,7	1,1	34
450	202	748	758	753	3,0	4,0	4,0	3,8	4,0	35
10,324,100	10,490,700	9,512,700	9,478,300	7,373,600	1,0	1,0	0,9	0,9	0,8	36
12,419	9,240	8,904	8,401	12,007	—	—	—	—	—	37
6,460	4,500	8,500	11,000	5,000	1,0	0,8	1,2	1,2	0,6	38
(5) 4,230	5,236	6,199	—	—	(5) 0,8	0,7	0,9	—	—	39
357	568	225	—	—	0,9	1,1	0,6	—	—	40
860	1,187	1,125	950	500	0,6	0,7	0,7	0,6	0,5	41
2,386	1,913	1,556	1,538	—	1,5	1,0	1,0	1,0	—	42

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* Countries for which the figures are not included in the totals.

(1) Average of two years (2) Exports of lint and unginned cotton reduced to terms of lint. (3) Average of three years. (4) Unofficial approximate figure. (5) Average of four years. (6) Estimates made by the Chinese Cotton Millowners' Association.

WORLD'S COTTON ACRE-

COTONNIER—SUPERFICIE, PRODUCTION ET RENDEMENT PAR HA.

No.	PAYS COUNTRIES	SUPERFICIE—*Area*				
		Moyenne *Average* 1923–24/1927–28	1928–29	1929–30	1930–31	1931–32
		hectares	hectares	hectares	hectares	hectares
43	Irak	—	—	—	—	—
44	Japan	1,559	962	726	639	—
45	Persia (1)	—	—	—	—	—
46	Siam	3,948	3,636	2,905	4,639	—
47	Syria and Lebanon	(2) 28,589	7,885	24,349	24,380	30,300
48	Turkey	(2) 154,776	164,743	121,732	246,578	198,814
	Total	12,690,000	13,480,000	13,090,000	12,610,000	12,070,000
	AFRICA					
49	French Eq. Africa	2,500	2,039	3,372	12,210	20,000
50	French West Africa (3) (1)	22,100	60,000	61,355	68,195	—
51	Dahomey	—	43,880	44,466	24,077	—
52	French Guinea	7,300	7,500	—	—	—
53	Haute-Volta	127,700	79,930	70,850	55,560	—
54	Mauritanie	(4) 535	900	900	430	—
55	Niger	—	7,500	7,560	5,650	—
56	Senegal	—	—	6,100	4,200	2,500
57	French Soudan	54,400	31,868	80,500	67,700	—
58	Algeria	4,540	4,931	5,651	4,136	1,846
59	Angola	(2) 4,680	4,799	16,006	—	—
60	Belgian Congo	77,548	107,259	127,006	136,553	—
61	Egypt	733,399	730,297	773,568	874,783	706,968
62	Erythria	3,200	2,500	2,500	2,500	2,800
63	Kenya	—	—	—	—	—
64	Madagascar	—	785	974	234	—
65	French Morocco	(2) 600	340	354	270	57
	Mozambique (5):					
66	Terr. de la Compagnie	10,542	9,768	8,832	8,690	—
67	Terr. de la Province	10,141	10,845	19,349	—	—
68	Nigeria (1)	—	—	—	—	—
	Nyassaland:					
69	Crops of Europ.	6,516	423	493	308	91
70	Crops of Natives	(4) 10,355	6,060	14,057	15,853	12,473
71	Uganda	216,817	282,915	268,407	299,338	350,269
72	Rhodesia (S)	11,522	743	2,501	3,634	2,070
73	Rhodesia (N)	2,579	95	63	50	—
74	Ruanda-Urundi	—	300	500	2,423	—
75	Ital. Somaliland (6)	2,700	8,250	10,850	7,000	5,890
76	Anglo-Eg. Soudan	75,747	115,111	149,452	156,711	148,612
77	Tanganyika	—	—	—	—	—
78	Togo (zone sous mandat français) (1)	(2) 18,362	—	—	—	—
79	Union of South Africa (7)	33,895	17,118	20,032	12,695	5,754
	Total	1,580,000	1,690,000	1,850,000	1,020,000	1,680,000
	AUSTRALASIA					
80	Australia	11,691	6,071	9,167	9,086	—
81	Fiji Islands	439	238	426	421	1,000
82	New Caledonia	—	—	—	—	—
83	New Hebrides (1)	—	—	—	—	—
	Total	20,000	14,000	16,000	15,000	15,000
	Grand Total:					
	Not including U.S.S.R.	32,510,000	34,610,000	34,680,000	33,950,000	31,370,000
	Including U.S.S.R.	33,050,000	35,580,000	35,730,000	35,530,000	33,530,000

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(1) Exportation de coton égrené et non égrené, exprimé en termes de coton égrené. (2) Moyenne de quatre années. (3) Les chiffres de la superficie comprennent aussi des terrains destinés en partie seulement à la culture du coton. (4) Moyenne de deux années. (5) Culture des Européens seulement. (6) Culture irriguée seulement. (7) Y compris le Swaziland.

AGE AND PRODUCTION

COTTON—AREA, PRODUCTION AND YIELD PER HECTARE

PRODUCTION DE COTON ÉGRENÉ — *Production of lint*					RENDEMENT PAR HECTARE *Yield per hectare*					No
Moyenne *Average* 1923-24/ 1927-28	1928-29	1929-30	1930-31	1931-32	Moyenne *Average* 1923-24/ 1927-28	1928-29	1929-30	1930-31	1931-32	
quintaux *quintals*	quintaux *quintals*	quintaux *quintals*	quintaux *quintals*	quintaux *quintals*	quint *quintals*	quint *quintals*	quint *quintals*	quint *quintals*	quint. *quintals*	
4,155	9,438	8,616	5,692	1,751	—	—	—	—	—	43
3,800	2,044	1,570	1,470	—	2 1	2,1	2 2	2,3	—	44
159,430	198,900	146,652	102,367	224,929	—	—	—	—	—	45
7,656	5,976	6,952	8,289	—	1,9	1,6	2 4	1 8	—	46
(2) 21,994	9,350	31,160	26,880	36,877	(2) 0,8	1,2	1 3	1,1	1 2	47
(2) 192,501	245,558	217,758	160,382	196,790	(2) 1,2	1 5	1 8	0,7	1 0	48
15,309,000	16,658,000	14,848,000	15,470,000	11,960,000	1,2	1,2	1,1	1,2	1 0	
1,200	1,080	2,049	7,440	11,064	0,5	0,3	0,6	0,6	0,6	49
8,444	18,015	17,223	20,458	13,436	—	—	—	—	—	50
(2) 10,870	16,240	20,633	11,550	—	—	0,4	0,5	0,5	—	51
3,424	6,000	—	—	—	0,5	0,8	—	—	—	52
67,270	46,300	55,930	33,400	16,640	0 5	0,6	0,8	0,6	—	53
(4) 95	153	198	240	—	(4) 0 2	0,2	0,5	—	—	54
1,700	8,125	2,500	1,975	—	—	0,4	0,3	0 3	—	55
(4) 1,500	3,250	945	1,790	875	—	—	0,2	0 4	0,3	56
15,100	22,890	35,000	32,000	—	0,3	0,7	0,4	0,5	—	57
7,900	13,633	16,889	11,606	2,92[illegible]	1,7	2 8	3,0	2,8	1,6	58
(2) 6,294	4,319	7,216	—	—	(2) 1,3	0 9	0,5	—	—	59
39,724	66,926	73,514	145,239	—	0 5	0 6	0,6	1,1	—	60
3,190,738	3,624,765	8,832 885	3,718,129	2,791 108	4,4	5,0	5,0	4,3	3,9	61
3,400	2,300	2,300	2,700	3,700	1,0	0,9	0,9	1,1	1,8	62
(2) 2,958	3,600	2,754	1,453	3,140	—	—	—	—	—	63
—	705	1,020	75	—	—	0,9	1,0	0,3	—	64
(2) 900	760	800	—	—	(2) 1,5	2,2	2,3	—	—	65
6,800	4,944	6,488	6,209	—	0,6	0,5	0,7	0,7	—	66
16,400	22,169	13,406	—	—	1,6	2,0	0,7	—	—	67
58,365	58,289	79,695	33,475	10,614	—	—	—	—	—	68
4,237	530	375	323	81	0,7	1,3	0,8	1,0	0,9	69
5,248	7,578	10,679	16,602	7,550	—	1,3	0,8	1,0	0,6	70
281,486	370,235	234,275	342,771	354,000	1,3	1,3	0,9	1,1	1,0	71
4,546	461	2,451	3,547	2,268	0,4	0,6	1,0	1,0	1,1	72
587	113	88	113	—	0,2	1,2	1,4	2,3	—	73
—	465	966	2,842	—	—	1,5	1,9	1,2	—	74
5,718	12,596	11,021	7,500	11,784	2 1	1,5	1,0	1,1	2,0	75
184,581	309,695	288,563	215,649	446,690	2,4	2,7	1,9	1,4	3,1	76
83,456	59,791	50,412	41,977	19,448	—	—	—	—	—	77
12,500	20,450	19,090	14,195	—	—	—	—	—	—	78
21,546	17,600	28,106	14,433	6 493	0,6	1,0	1,4	1,1	1,1	79
3,096,000	4,719,000	4,823,000	4,720,000	3,940,000	2,5	2,8	2,6	2,5	2,3	
17,538	10,920	23,165	20,745	8,400	1,5	1,8	2,5	2,3	—	80
560	208	493	722	483	1,3	0,9	1,2	1,7	0 5	81
2,076	3,529	1,789	1,524	984	—	—	—	—	—	82
5,590	3,343	4,836	3,932	—	—	—	—	—	—	83
26,000	18,000	30,000	27,000	14,000	1,3	1,3	1,9	1,8	0,9	
52,660,000	55,520,000	54,790,000	52,890,000	55,600,000	1,6	1,6	1,6	1,6	1,8	
54,070,000	58,060,000	57,560,000	56,340,000	59,690,000	1,6	1,6	1,6	1,6	1,8	

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(1) Exports of lint and of unginned cotton reduced to terms of lint. (2) Average of four years (3) The figures for the area comprise also land only partly devoted to the growing of cotton (4) Average of two years (5) Cultivation by Europeans only. (6) Irrigated crops only (7) Including Swaziland

INTERNATIONAL COTTON STATISTICS

The present tabulation is the final result of the Census of Cotton Consumption in the Cotton Spinning Mills of the World for the year ended 31st January, 1933, and of Cotton Mill Stocks on that day. It should be borne in mind that the figures published herewith relate to raw cotton only, and do not contain linters or waste cotton of any kind whatsoever. Furthermore, the spindle figures contain neither waste nor doubling spindles.

The total **World's Cotton Mill Consumption for the HALF YEAR ended 31st January, 1933,** compared with the same period of the previous year, is as follows —

	31st January 1933	31st January 1932	Increase or Decrease over same period in 1932
	bales	bales	bales
American Cotton ..	6,847,000	*6,117,000*	+730,000
East Indian Cotton ..	2,059,000	*2,812,000*	−753,000
Egyptian Cotton ..	462,000	*487,000*	−25,000
Sundries	2,514,000	*2,114,000*	+400,000
All kinds of Cotton ..	11,882 000	*11,530,000*	+352,000

The total **World's Cotton Mill Stocks on 1st February, 1933,** according to Continental distribution, were as follows —

American Cotton :

Europe ..	751,000 bales *against*	*756,000 bales on 1st Feb., 1932.*
Asia . .	416 000 „ „	*370,000 „ „ „ „*
America ..	1,516,000 „ „	*1,644,000 „ „ „ „*

The total World's Mill Stocks of American Cotton on 31st Jan., 1933, were 2,699,000 bales, as against 2,775,000 bales in the year 1932.

East Indian Cotton :

Europe ..	149,000 bales *against*	*198,000 bales on 1st Feb., 1932*
Asia	672,000 „ „	*764,000 „ „ „ „*

Altogether the World's Mill Stocks of East Indian Cotton were 832,000 bales against 984,000 twelve months ago.

Egyptian Cotton :

Europe ..	150,000 bales *against*	*151,000 bales on 1st Feb., 1932*
Asia	35,000 „ „	*35,000 „ „ „ „*
America ..	20,000 „ „	*21,000 „ „ „ „*

The total World's Mill Stocks of Egyptian Cotton were 208,000 bales against 212,000 bales twelve months ago.

Sundry Cottons :

Europe ..	292,000 bales	*against*	*325,000 bales on 1st Feb., 1932.*
Asia	323,000 „	„	*163,000 „ „ „ „*
America ..	125,000 „	„	*131,000 „ „ „ „*

The **Total World's Mill Stocks** of all kinds of cotton on Jan 31st, 1933, were 4,542,000 bales against 4,608,000 bales on Jan 31st, 1932.

The **World's Total Spindles** on Jan. 31st, were 158,984,000 as against 161,002,000 last July The World's Consumption per thousand spindles shows an increase from 67·03 bales last July to 74·74 bales in January, 1933.

SHORT-TIME TABLE

The spindle-hours stopped by the mills reporting, when worked out over the whole industry of each country, indicate the following stoppages in weeks of 48 hours, for the industries in the countries tabulated below :—

	Half-year ending Jan. 31st, 1933	Half-year ending July 31st, 1932
Great Britain	7·91	10·32*
Germany	5·60	6·16
France	7·83	11·19‡
Italy	7·97	7·56
Czecho-Slovakia	10·12	10·01
Belgium	7·54	9·29
Poland	2·87	3·18
Switzerland	4·57	5·09
Holland	7·54	8·13
Austria	10·34	7·32
Sweden	2·40	1·25
Portugal	0·40	Nil
Finland	3·65	3·17
Hungary	0·96	0·58
Denmark	0·91	0·84
Norway	1·82	3·85
Japan	11·92	15·57†
China	6·21	15·95**
Canada	9·92	8·63
Mexico	2·51	6·86
Brazil	2·60	2·18
Spain	Nil	Nil

U.S A. In Jan. 1933, 23,767,000 spindles were active out of a total of 31,255,000, as compared with 19,758,000 active last July.

* The stoppage of the American Section amounted to 8·78 (*11·78*) weeks, and that of the Egyptian Section to 6·48 (*7·78*) weeks of 48 hours. There were 91 (*90*) firms with 4,730,311 (*4,226,401*) spindles in the American Section completely stopped during the period under review. In the Egyptian Section 9 (*7*) firms with 741,068 (*391,582*) spindles were completely stopped during the six months. Firms with 371,780 (*431,510*) spindles have closed down indefinitely *during* the period under review.

† This figure represents working weeks of 48 hours. The general working week in Japan is 120 hours. Calculated in Japanese working weeks the stoppage is equal to 4·77 (*6·23*) weeks for the last six months under review.

** The working week in China is 132 hours Calculated in Chinese working weeks the stoppage is equal to 2·26 (*5·80*) weeks for the period under review.

‡ France : 1,721,000 spindles have been completely stopped during the past six months.

(Figures in brackets and in *italic* refer to previous six months.)

Estimated TOTAL WORLD'S COTTON MILL CON- with previous figures for comparison, on basis of Spinners'

	COUNTRIES	IN THOUSANDS OF ACTUAL BALES (regardless of weight)							
		AMERICAN				EAST INDIAN			
		Half year ending				Half year ending			
		Jan. 31 1933	July 31 1932	Jan 31 1932	Jan 31 1931	**Jan. 31 1933**	July 31 1932	Jan 31 1932	Jan 31 1931
	EUROPE :—								
(1)	Great Britain ..	665	733	609	493	56	53	130	131
(2)	Germany	433	426	437	364	51	48	81	116
(3)	France	368	263	308	371	74	62	90	121
(4)	Russia*	—	—	—	52	23	25	30	61
(5)	Italy	319	300	259	240	46	50	94	120
(6)	Czecho-Slovakia ..	132	127	139	146	11	11	23	51
(7)	Belgium	82	68	77	70	46	35	62	70
(8)	Spain	154	160	125	109	21	21	30	43
(9)	Poland	116	87	79	92	2	4	7	13
(10)	Switzerland ..	25	21	20	19	4	3	4	5
(11)	Holland	64	55	67	70	13	10	14	25
(12)	Austria	30	40	37	32	3	4	10	14
(13)	Sweden	52	51	55	40	—	1	1	1
(14)	Portugal	23	23	15	27	1	—	—	2
(15)	Finland	16	15	16	18	—	—	—	—
(16)	Hungary	30	15	26	23	2	2	5	5
(17)	Denmark	12	11	12	11	—	—	—	—
(18)	Norway	6	5	4	5	—	—	—	—
	Europe Total ..	2,527	2,400	2,285	2,182	353	329	581	787
	ASIA :								
(1)	India	89	121	69	12	1,154	1,121	1,175	1,152
(2)	Japan	899	933	630	426	438	398	719	755
(3)	China	457	451	432	164	93	111	310	278
	Asia Total ..	1,445	1,505	1,131	602	1,685	1,630	2,204	2,185
	AMERICA :								
(1)	U.S.A.	2,749	2,179	2,568	2,377	11	9	12	22
(2)	Canada	80	84	104	91	—	—	—	—
(3)	Mexico	—	—	3	—	—	—	—	—
(4)	Brazil	—	—	—	—	—	—	—	—
	America Total ..	2,829	2,263	2,675	2,468	11	9	12	22
	Sundries	46	34	26	26	10	8	15	19
	HALF-YEAR'S TOTAL ..	6,847	6,202	6,117	5,278	2,059	1,976	2,812	3,013

* No returns received from Russia, and figures for Russia are estimated from trade sources

SUMPTION for the Half-year ending 31st January, 1933, returns made to the International Cotton Federation.

IN THOUSANDS OF ACTUAL BALES (regardless of weight)												
EGYPTIAN				SUNDRIES				TOTAL				
Half year ending				Half year ending				Half year ending				
Jan. 31 1933	July 31 1932	Jan 31 1932	Jan 31 19 1	**Jan. 31 1933**	July 31 1932	Jan 31 1932	Jan 31 1931	**Jan. 31 1933**	July 31 1932	Jan 31 1932	Jan 31 1931	
143	149	152	113	216	239	321	239	1 080	1 174	1,212	976	(*1*)
44	50	44	36	51	49	61	40	579	573	623	556	(*2*)
53	44	60	49	32	27	38	54	527	396	496	595	(*3*)
30	35	40	25	760	740	650	845	813	800	720	983	(*4*)
31	32	30	22	9	15	13	11	405	397	396	393	(*5*)
10	11	13	10	8	10	10	10	161	159	185	217	(*6*)
2	2	3	4	32	22	34	37	162	127	176	190	(*7*)
21	25	24	24	8	11	7	23	204	217	186	199	(*8*)
7	8	4	5	4	3	2	11	129	102	92	121	(*9*)
15	16	18	19	1	2	3	4	45	42	45	47	(*10*)
—	—	—	—	3	4	4	6	80	69	85	101	(*11*)
3	3	3	2	3	5	2	3	39	52	52	51	(*12*)
1	1	1	1	—	—	—	—	53	53	57	42	(*13*)
1	2	—	—	12	9	4	17	37	34	19	46	(*14*)
—	—	—	—	—	—	1	1	16	15	17	19	(*15*)
5	10	1	—	—	1	1	1	37	28	33	29	(*16*)
—	—	—	—	1	1	1	1	13	12	13	12	(*17*)
—	—	—	—	—	—	—	—	6	5	4	5	(*18*)
366	388	393	310	1,140	1 138	1,152	1 303	4,386	4,255	4,411	4,582	
21	37	26	17	108	88	63	59	1 372	1,367	1,333	1,240	(*1*)
25	26	23	15	26	16	24	45	1 388	1,373	1,396	1,241	(*2*)
9	3	5	3	790	476	466	735	1,349	1,041	1,213	1,180	(*3*)
55	66	54	35	924	580	553	839	4,109	3,781	3,942	3,661	
27	27	26	35	13	11	15	20	2,800	2,226	2,621	2,454	(*1*)
3	3	5	5	—	—	—	—	83	87	109	96	(*2*)
—	—	—	—	78	59	98	74	78	59	101	74	(*3*)
—	—	—	—	229	223	242	176	229	223	242	176	(*4*)
30	30	31	40	320	293	355	270	3,190	2,595	3,073	2,800	
11	9	9	9	130	110	54	67	197	161	104	121	
462	493	487	394	2,514	2,121	2,114	2,479	11,882	10,792	11,530	11,164	

Estimated TOTAL WORLD'S COTTON MILL STOCKS—comparison on basis of Spinners' returns

	COUNTRIES	IN THOUSANDS OF ACTUAL BALES (regardless of weight)							
		AMERICAN				EAST INDIAN			
		Half-year ending				Half-year ending			
		Jan. 31 1933	July 31 1932	Jan 31 1932	Jan 31 1931	Jan. 31 1933	July 31 1932	Jan. 31 1932	Jan. 31 1931
	EUROPE:								
(1)	Great Britain ..	68	63	67	65	15	12	12	29
(2)	Germany	120	129	136	94	23	33	27	47
(3)	France	141	132	134	165	42	36	62	88
(4)	Russia†	—	—	—	—	5	5	5	—
(5)	Italy	174	149	163	128	23	19	31	53
(6)	Czecho-Slovakia ..	40	34	50	38	3	3	6	16
(7)	Belgium	37	43	58	35	21	25	33	37
(8)	Spain	26	22	26	22	4	3	3	10
(9)	Poland	19	14	8	11	1	1	1	3
(10)	Switzerland ..	22	17	18	17	3	3	3	6
(11)	Holland	44	41	44	31	8	11	12	13
(12)	Austria	13	14	11	8	1	1	2	3
(13)	Sweden	23	18	22	20	—	—	—	1
(14)	Portugal	5	5	2	2	—	—	—	—
(15)	Finland	4	4	4	4	—	—	—	—
(16)	Hungary . ..	7	3	6	5	—	1	1	1
(17)	Denmark . ..	5	5	4	5	—	—	—	—
(18)	Norway	3	2	3	2	—	—	—	—
	Europe Total	751	695	756	652	149	153	198	305
	ASIA:								
(1)	India	35	102	32	13	591	692	609	694
(2)	Japan	270	370	231	137	62	134	103	120
(3)	China	111	154	107	42	19	34	52	71
	Asia Total ..	416	626	370	192	672	860	764	885
	AMERICA:								
(1)	U.S.A.	1,451	1,164	1,582	1,520	7	15	17	16
(2)	Canada	65	49	62	58	—	—	—	—
(3)	Mexico	—	—	—	—	—	—	—	—
(4)	Brazil	—	—	—	—	—	—	—	—
	America Total ..	1,516	1,213	1,644	1,578	7	15	17	16
	Sundries	16	9	5	5	4	3	5	6
	HALF-YEAR'S TOTAL ..	2,699	2,543	2,775	2,427	832	1,031	984	1,212

† No returns from Russia. Figures for this country are estimated only

on 31st January, 1933, with previous figures for made to the International Cotton Federation.

IN THOUSANDS OF ACTUAL BALES (regardless of weight)												
EGYPTIAN				SUNDRIES				TOTAL				
Half year ending				Half-year ending				Half-year ending				
Jan. 31 1933	July 31 1932	Jan 31 1932	Jan 31 1931	**Jan. 31 1933**	July 31 1932	Jan 31 1932	Jan 31 1931	**Jan. 31 1933**	July 31 1932	Jan 31 1932	Jan 31 1931	
33	37	37	33	56	50	70	51	172	162	186	178	*(1)*
16	20	19	14	14	13	13	14	173	195	195	169	*(2)*
31	30	25	38	21	16	20	25	235	214	241	316	*(3)*
10	10	15	4	180	200	190	200	195	215	210	204	*(4)*
22	29	20	8	4	7	8	7	223	204	222	194	*(5)*
5	3	3	3	4	2	3	3	52	42	62	60	*(6)*
2	4	4	2	7	16	11	20	67	88	106	94	*(7)*
8	8	8	7	1	2	2	4	39	35	39	43	*(8)*
3	3	2	1	1	—	—	2	24	18	11	17	*(9)*
13	13	15	16	1	2	3	3	39	35	39	42	*(10)*
—	—	—	—	1	3	2	2	53	55	58	46	*(11)*
2	1	2	1	1	1	1	1	17	17	16	13	*(12)*
1	1	1	1	—	—	—	—	24	19	23	22	*(13)*
1	1	—	—	1	1	1	4	7	7	3	6	*(14)*
—	—	—	—	—	—	—	1	4	4	4	5	*(15)*
3	5	—	—	—	—	1	—	10	9	8	6	*(16)*
—	—	—	—	—	1	—	—	5	6	4	5	*(17)*
—	—	—	—	—	—	—	—	3	2	3	2	*(18)*
150	165	151	128	292	314	325	337	1 342	1 327	1,430	1 422	
16	19	19	14	35	59	33	10	677	872	693	731	*(1)*
17	17	15	9	14	9	3	15	363	530	352	281	*(2)*
2	3	1	1	274	164	127	253	406	355	287	367	*(3)*
35	39	35	24	323	232	163	278	1,446	1,757	1 332	1 379	
18	21	19	44	12	12	13	15	1,488	1,212	1,631	1,595	*(1)*
2	2	2	2	—	—	—	—	67	51	64	60	*(2)*
—	—	—	—	55	24	61	22	55	24	61	22	*(3)*
—	—	—	—	58	34	57	41	58	34	57	41	*(4)*
20	23	21	46	125	70	131	78	1,668	1,321	1,813	1,718	
3	1	5	4	63	44	18	52	86	57	33	67	
208	228	212	202	803	660	637	745	4,542	4,462	4,608	4,586	

ESTIMATED TOTAL WORLD'S COTTON
years 31st January, 1933, and 31st July, the International

	COUNTRIES	Total Estimated Number of Spinning Spindles		Mule Spindles	
		Half-year ended		Half-year ended	
		Jan 31, 1933	July 31, 1932	Jan 31, 1933	July 31, 1932
	Europe:				
(1)	Great Britain	50,167	51,891	38,177	39,183
(2)	Germany .. .	9,846	10,233	3,471	3,933
(3)	France..	10,170	10,144	3,055	3,541
(4)	Russia†	9,200	9,200	2,187	2,187
(5)	Italy	5,360	5,384	570	580
(6)	Czecho-Slovakia ..	3,627	3,622	1,585	1,594
(7)	Belgium	2,096	2,156	349	421
(8)	Spain	2,070	2,070	431	431
(9)	Poland .. .	1,797	1,706	462	444
(10)	Switzerland	1,306	1,346	465	513
(11)	Holland	1,225	1,213	269	259
(12)	Austria	763	767	238	237
(13)	Sweden	593	596	49	36
(14)	Portugal	446	453	137	143
(15)	Finland	264	263	46	46
(16)	Hungary	257	217	44	44
(17)	Denmark	100	100	—	—
(18)	Norway	57	56	10	10
	Total	99,344	101,417	51,545	53,602
	Asia:				
(1)	India	9,506	9,312	776	803
(2)	Japan	7 965	7,798	35	35
(3)	China	4,493	4,285	—	—
	Total	21,964	21,395	811	838
	America:				
(1)	U S.A.*	31,255	31,709	1,166	1,166
(2)	Canada	1,261	1,245	143	129
(3)	Mexico	830	830	7	7
(4)	Brazil	2,620	2,690	5	3
	Total	35,966	36,474	1,321	1,305
	Sundries ..	1,710	1,716	334	160
	Grand Total ..	158,984	161,002	54,011	55,905

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* U.S A.—The division between mule and ring and the number of spindles on Egyptian is only approximate.

† No return received from Russia. Figures for this country are estimated.

SPINNING SPINDLES (000's omitted) for the half-
1932, on basis of returns made to
Cotton Federation.

RING SPINDLES		SPINDLES SPINNING EGYPTIAN COTTON		SPINDLES IN COURSE OF ERECTION		
Half-year ended		Half-year ended		Half-year ended		
Jan. 31, 1933	July 31, 1932	Jan 31, 1933	July 31, 1932	Jan 31, 1933	July 31, 1932	
11,990	12,708	15,831	16,720	8	11	*(1)*
6,375	6,300	1,178	1,239	15	3	*(2)*
7,115	6,603	2,280	1,829	2	1	*(3)*
7,013	7,013	210	225	?	?	*(4)*
4,790	4,804	650	650	—	—	*(5)*
2,042	2,028	403	408	1	—	*(6)*
1,747	1,735	41	48	1	1	*(7)*
1,639	1,639	207	130	24	—	*(8)*
1,335	1,262	219	273	2	—	*(9)*
841	833	616	684	—	—	*(10)*
956	954	1	—	—	—	*(11)*
525	530	48	60	—	—	*(12)*
544	560	16	28	1	6	*(13)*
309	310	26	20	—	—	*(14)*
218	217	12	11	—	—	*(15)*
213	173	25	55	3	1	*(16)*
100	100	—	—	—	—	*(17)*
47	46	—	—	—	2	*(18)*
47,799	47,815	21,763	22,380	57	25	
8,730	8,509	320	416	34	65	*(1)*
7,930	7,763	649	199	150	167	*(2)*
4,493	4,285	—	—	—	—	*(3)*
21,153	20,557	969	615	184	232	
30,089	30,543	1,000	1,000	—	?	*(1)*
1,118	1,116	46	44	—	—	*(2)*
823	823	4	2	—	2	*(3)*
2,615	2,687	—	—	—	5	*(4)*
34,645	35,169	1,050	1,046	—	7	
1,376	1,556	116	148	33	—	
104,973	105,097	23,898	24,189	274	264	

TOTAL WORLD.

Date	Total Estimated Number of Spinning Spindles existing in world	ESTIMATED MILL STOCKS—In thousands of ACTUAL BALES (000's omitted) "INVISIBLE" SUPPLY					Per 1 000 Spindles Total, *all* kind of Cotton
		AMERICAN	EAST INDIAN	EGYPTIAN	SUNDRIES	TOTAL	Bales
Jan. 31, 1933	158,984,000	2,699	832	208	803	4,542	28 57
Feb. 1, 1932	162,070,000	2,775	984	212	637	4,608	28 43
„ 1931	163,571,000	2,427	1,212	202	745	4,586	28 04
„ 1930	165,143,000	2,742	1,173	224	792	4,931	29 86
„ 1929	165,104,000	2,958	1,216	182	938	5,294	32 06
„ 1928	164,979,000	2,867	969	183	863	4,882	29 59
„ 1927	164,616,000	2,982	829	173	771	4,755	28 88
„ 1926	162,972,000	2,862	915	200	671	4,648	28·52
„ 1925	159,904,000	2,369	738	197	655	3,959	24·76
„ 1924	158,023,000	2,369	1,030	221	468	4,088	25 87
Mar. 1, 1913	142,186,000	3,448	716	279	973	5,416	38 09
Aug. 1, 1932	161,002,000	2,543	1,031	228	660	4,462	27 71
„ 1931	162,278,000	1,871	1,565	217	660	4,313	26 58
„ 1930	164,108,000	1,985	1,667	237	609	4,498	27·41
„ 1929	164,211,000	2,129	1,761	228	745	4,863	29 61
„ 1928	165,103,000	2,112	1,728	170	777	4,787	28 99
„ 1927	164,597,000	3,056	1,515	210	626	5,407	32·85
„ 1926	163,723,000	1,969	1,589	201	739	4,498	27·47
„ 1925	161,363,000	1,833	1,599	181	654	4,267	26·44
„ 1924	158,773,000	1,327	1,592	188	467	3,574	22 51
Sept. 1, 1913	143,449,000	1,655	1,405	273	744	4,077	28 42

ESTIMATED COTTON MILL CONSUMPTION—In thousands of ACTUAL BALES (000's omitted)

Half-year ending **Jan. 31, 1933**	158,984,000	6847		2059		462		2514		11882		74 74	
July 31, 1932	161,002,000	6202	*12319*	1976	*4788*	493	*980*	2121	*4235*	10792	*22322*	67·03	*138·17*
Jan. 31, 1932	162,070,000	6117		2812		487		2114		11530		71·14	
July 31, 1931	162,278,000	5630	*10908*	2850	*5863*	459	*853*	2385	*4864*	11324	*22488*	69·75	*138 00*
Jan. 31, 1931	163,571,000	5278		3013		394		2479		11164		68·25	
July 31, 1930	164,108,000	5940	*13023*	3102	*6087*	435	*937*	2530	*5162*	12007	*25209*	73·16	*153·10*
Jan. 31, 1930	165,143,000	7083		2985		502		2632		13202		79·94	
July 31, 1929	164,211,000	7463	*15076*	2604	*5178*	492	*989*	2455	*4639*	13014	*25882*	79 25	*157·19*
Jan. 31, 1929	165,104,000	7613		2574		497		2184		12868		77·94	
July 31, 1928	165,103,000	7181	*15407*	2220	*4523*	467	*956*	2685	*4654*	12553	*25540*	76·03	*154 75*
Jan. 31, 1928	164,979,000	8226		2303		489		1969		12987		78·72	
July 31, 1927	164,597,000	8357	*15780*	2378	*5196*	506	*993*	2171	*4172*	13412	*26141*	81·48	*158·8[illegible]*
Jan. 31, 1927	164,616,000	7423		2818		487		2001		12729		77·32	
July 31, 1926	163,723,000	6756	*13730*	2787	*5572*	477	*921*	2323	*4458*	12343	*24681*	75·39	*151·10*
Jan. 31, 1926	162,972,000	6974		2785		444		2135		12338		75 71	
July 31, 1925	161,363,000	7049	*13256*	2789	*5521*	470	*970*	1818	*3547*	12126	*23294*	75·15	*144 99*
Jan. 31, 1925	159,904,000	6207		2732		500		1729		11168		69·84	
Year ending **Aug. 31, 1913**	143,449,000	14630		3997		946		3447		23000		160·34	

SPECIFICATION OF PART OF THE COTTON RETURNED AS "**SUNDRIES**" (IN ACTUAL BALES)

Six Months ending Jan. 31st, 1933, estimated from Actual Returns.

CONSUMPTION

Country	Peruvian	Brazilian	Argentine	West Indian	Mexican	Turkish	Russian	Mesopotamian	Sudan	East African	West African	South African	Australian	Chinese	Others	Total
Great Britain	47,265	6,292	17,908	9,434	787	7,260	39,671	693	59,824	14,732	6,270	1,603	23	12	4,677	216,451
Germany	14,015	678	8,610	1,846	92	1,002	—	416	—	921	21,495	1,619	—	220	—	50,914
France	1,400	2,383	1,799	322	—	1,382	—	—	4,358	—	12,246	—	—	—	8,465	32,355
Italy	354	—	872	—	—	3,451	398	271	—	2,430	—	—	—	—	745	8,521
Belgium	—	29	132	—	—	—	—	—	66	—	31,018*	—	—	—	544	31,789
Switzerland	662	—	43	—	—	38	—	—	233	256	210	—	—	—	123	1,565
Poland	1,947	—	—	—	—	1,557	—	—	—	—	—	—	—	—	—	3,504
Holland	135	109	455	—	—	—	—	—	—	—	2,226	—	—	—	—	2,925
Czecho-Slovakia	1,388	—	61	—	—	239	—	—	234	115	6,284	21	—	—	108	8,450
Austria	245	48	182	—	1	—	—	—	—	—	2,756	—	—	—	—	3,232
China	—	—	—	—	—	—	—	—	—	—	—	—	—	790,000	—	790,000
Brazil	—	229,000	—	—	—	—	—	—	—	—	—	—	—	—	—	229,000
Mexico	—	—	—	—	78,000	—	—	—	—	—	—	—	—	—	—	78,000
Spain	—	—	6,695	—	—	—	—	—	—	—	—	—	—	—	1,517†	8,212
Japan	—	—	—	—	—	—	—	—	—	111	—	—	—	2,814	1,133 Saigon & Annam 10,047 Korea 12,078 Others	26,183
India	—	—	—	380	265	—	250	—	8,471	73,918	5,693	14,449	—	—	4,285	107,711
Total	67,411	238,539	86,757	11,982	79,145	14,929	40,319	1,380	73,186	92,483	88,198	17,692	23	793,046	43,722	1,598,812

STOCKS

Great Britain	11,662	922	2,746	6,389	24	449	3,183	364	24,413	2,217	410	355	—	17	2,982	56,133
Germany	6,069	109	1,713	526	3	432	—	219	—	691	3,220	394	—	319	—	13,695
France	2,243	3,691	2,162	182	—	407	—	—	3,974	—	4,155	—	—	—	4,411	21,225
Italy	283	—	6	—	—	1,060	1,775	131	—	899	—	—	—	—	299	4,453
Belgium	—	1	88	—	—	—	—	—	29	—	6,179*	—	—	—	519	6,816
Switzerland	459	—	—	—	—	2	—	—	269	519	104	—	—	—	11	1,364
Holland	91	20	358	—	—	—	—	—	—	—	757	—	—	—	—	1,226
Czecho-Slovakia	1,502	1	20	—	—	106	—	—	74	—	2,645	39	—	—	183	4,570
Austria	183	—	102	—	—	—	—	—	—	—	891	—	—	—	—	1,176
Poland	412	—	—	—	—	339	—	—	—	—	—	—	—	—	—	751
China	—	—	—	—	—	—	—	—	—	—	—	—	—	274,000	—	274,000
Brazil	—	58,000	—	—	—	—	—	—	—	—	—	—	—	—	—	58,000
Mexico	—	—	—	—	55,000	—	—	—	—	—	—	—	—	—	—	55,000
Spain	—	—	450	—	—	—	—	—	—	—	—	—	—	—	585†	1,035
India	—	—	—	11	—	—	5	354	9,451	17,037	2,205	5,749	—	—	204	35,016
Total	22,904	62,744	7,645	7,108	55,027	2,795	4,963	1,068	38,210	21,363	20,566	6,537	—	274,336	9,194	534,460

* Belgian Congo bales, each weighing about 100 lbs. † Spanish

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American Cotton

Final Ginning Report.

The final ginning report of the season, issued on March 20 by the Census Bureau, showed that the total amount ginned of last year's cotton crop was 12,703,000 running bales against 16,629,000 bales and 13,750 000 bales for the two preceding crops. The amount ginned since January 16, when the previous report was made up, was 285,000 bales, against 604,000 bales in the same period last year. The cotton included in the total, but not yet ginned, was estimated at 31,000 bales against 97,000 bales last year. The total included 722,000 round bales and 8,000 bales American-Egyptian, against 621,000 round bales and 14,000 bales American-Egyptian shown in the corresponding report last year. The average gross weight of the bale was estimated at 511.5 lbs., which compares with 514 lbs. last year. The total in equivalent 500-lb. bales is 12,944,000 bales, against 17,096,000 bales for the previous crop.

The following table gives details of ginnings with comparisons: —

	1933	1932	1931
Alabama	934,000	1,385,021	1,444,886
Arizona	67,000	110,922	150,545
Arkansas	1,283,000	1,836,132	863,443
California	124,000	171,238	256,337
Florida	15,000	43,405	51,118
Georgia	862,000	1,393,715	1,597,475
Louisiana	599,000	876,593	704,750
Mississippi	1,161,000	1,719,454	1,458,488
Missouri	300,000	280,367	153,337
New Mexico	67,000	93,762	95,841
North Carolina	680,000	771,186	800,582
Oklahoma	1,072,000	1,235,856	856,748
South Carolina	722,000	1,010,271	1,015,273
Tennessee	468,000	577,994	371,433
Texas	4,304,000	5,068,779	3,886,126
Virginia	31,000	42,477	42,713
Other States	14,000	11,702	6,423
Total	12,703,000	16,628,874	13,755,518

Grade, Staple Length, and Tenderability Report.

(Issued by the United States Department of Agriculture Bureau of Agricultural Economics, February 10, 1933.)

(Estimated from data obtained from the classification of samples representing American Upland and American-Egyptian cotton, classed according to Official Cotton Standards of the United States.)

PRELIMINARY SUMMARY

	1932–33		1931–32	
	Bales	Per cent.	Bales	Per cent.
Total ginnings to January 16, as reported by the Bureau of the Census	12,420,000	100·0	16,002,300	100·0
Total American upland	12,412,600	99·9	15,991,400	99·9
Total American-Egyptian	7,400	·1	10,900	·1
Grades (American upland) :				
Extra white, good middling and above	110,300	·9	77,300	·5
Extra white, strict middling	134,300	1·1	173,300	1·1
Extra white, middling	84,600	·7	86,700	·5
Extra white, strict low middling	95,200	·8	55,400	·3
Extra white, low middling and below	26,800	·2	31,100	·2
White, good middling and better	260,600	2·1	952,300	6·0
White, strict middling	3,146,000	25·3	5,844,200	36·5
White, middling	4,452,200	35·8	5,199,800	32·5
White, strict low middling	1,558,900	12·6	1,722,800	10·8
White, low middling	313,800	2·5	546,100	3·4
White, below low middling	129,400	1·0	306,500	1·9
Spotted, good middling	194,100	1·6	115,100	·7
Spotted, strict middling	1,044,700	8·4	426,700	2·7
Spotted, middling	645,200	5·2	237,200	1·5
Spotted, strict low middling	134,200	1·1	145,200	·9
Spotted, low middling	26,300	·2	40,100	·2
Yellow tinged, strict middling and above	12,300	·1	5,800	*
Yellow tinged, middling and below	11,900	·1	7,200	·1
Light yellow stained	500	*	600	*
Yellow stained	100	*	100	*
Grey, strict middling and above	7,000	·1	7,200	·1
Grey, middling	2,900	*	4,200	*
Blue stained	—	—	—	—
No grade	21,300	·2	6,500	*

* Less than ·1 per cent.

STAPLE-LENGTH DISTRIBUTION

Staple-length (inches)	Prior to January 16, 1933		Prior to January 16, 1932	
	Bales	Per cent.	Bales	Per cent.
All lengths	12,412,600	100·0	15,991,400	100·0
Shorter than $\frac{7}{8}$	711,600	5·7	929,200	5·8
$\frac{7}{8}$ and $\frac{29}{32}$	4,700,400	37·9	6,446,600	40·3
$\frac{15}{16}$ and $\frac{31}{32}$	3,627,500	29·2	4,390,900	27·5
1 and $1\frac{1}{32}$	1,799,600	14·5	2,405,600	15·0
$1\frac{1}{16}$ and $1\frac{3}{32}$	860,200	6·9	993,400	6·2
$1\frac{1}{8}$ and $1\frac{5}{32}$	622,500	5·0	569,500	3·6
$1\frac{3}{16}$ and $1\frac{7}{32}$	85,000	·7	224,900	1·4
$1\frac{1}{4}$ and longer	5,800	*	31,300	·2

TENDERABILITY ACCORDING TO SECTION 5 U S COTTON FUTURES ACT

Tenderability	Prior to January 16 1933 Bales	Prior to January 16 1933 Per cent	Prior to January 16 1932 Bales	Prior to January 16 1932 Per cent
Total	12 412 600	100 0	15 991 400	100 0
Total tenderable	11 417 100	92 0	14 633 700	91 5
Tenderable ⅞ in to 1⅛ in inclusive	9 859 100	79 4	12 828 500	80 2
Tenderable over 1⅛ in	1 558 000	12 6	1 805 200	11 3
Total untenderable	995 500	8 0	1 357 700	8 5

DATES OF CROP REPORTS DURING 1933—U.S. CROP REPORTING BOARD

Date of Issuance	Covering Reports as of	Condition 1932	Condition 1933	Probable Production 000 omitted 1932	Probable Production 000 omitted 1933
Monday May 22nd—Revision of 1932 acreage and yield					
Saturday July 8th—Acreage in cultivation July 1	July 1			*†37 290	
Tuesday August 8th—Condition and probable production	Aug 1	65 6		11 306	
Friday September 8th—Condition and probable production and estimate of acreage abandoned since July 1	Sept 1	56 6		*36 611 11 310	
Monday October 9th—Condition and probable production	Oct 1	54 2		11 425	
Wednesday November 8th—Probable production of cotton	Nov 1			11 947	
Friday December 8th—Preliminary estimate of production and estimate of acreage abandoned since July 1st	Dec 1			*37 589 12 727	

* Thousands of acres reported in cultivation
† December 1st report revised the area planted July 1st to 38 227 000 acres
All of the above reports will be issued at 11 a m U S Eastern Standard Time

U.S. BUREAU OF THE CENSUS GINNING REPORTS

Date of Publication	Estimated Ginnings to	1932–33	1933 34
Aug 8	July 31	71 063	—
Aug 23	Aug 15	251 183	—
Sept 8	Aug 31	866 185	—
Sept 23	Sept 15	2 645 900	—
Oct 8	Sept 30	4 835 904	—
Oct 25	Oct 17	7 311 392	—
Nov 8	Oct 31	9 249 325	—
Nov 21	Nov 13	10 535 901	—
Dec 8	Nov 30	11 636 958	—
Dec 20	Dec 12	12 085 457	—
Jan 23	Jan 15	12 418 310	—
Mar 20	Final figures	—	—
1933 crop (running bales)			—

Geographic Distribution of Staple Lengths of American Upland Cotton—Crops of 1928, 1929, and 1930.

*By W. B. LANHAM, Senior Agricultural Economist, Division of Cotton Merchants, Washington, U.S.A.**

INFORMED students of the world's cotton markets have long recognized quality in cotton as one of the important factors affecting its utility and its price. As a basis for any sound programme of cotton production locally, regionally and nationally, a systematic body of information concerning the quality of American cotton is essential. We need to know, among other things, the total production of each different grade and staple and the seasonal variations and trends in grade and staple for the country as a whole, for each of the cotton-growing states, and for sub-divisions of these states. Such information is well recognized as aiding both the production and the marketing of the crop.

Data are here presented showing for three consecutive crop years, 1928, 1929 and 1930, the number of bales of each staple length of American Upland cotton ginned in the United States and in each of the cotton-producing states. By graphic presentation, the approximate location of each gin co-operating in this survey is also shown, according to average staple length of cotton ginned. This report is confined to a consideration of staple length for the reason that grade of cotton is more dependent on weather than on locality of growth.

The estimates of grade and staple, from which the data here presented are taken, are based on the classification of samples obtained from certain ginners who agreed to furnish a sample from each bale ginned at their gins during the season. Co-operating with the various experiment stations, the gins were carefully selected according to probable volume of ginnings and location within the areas they were chosen to represent. In other words, they were so selected that the cotton ginned at these gins would represent as nearly as possible a cross-section of the grade and staple of cotton grown in all portions of each state and throughout the Cotton Belt.

Table I shows for each of the three cotton years covered by these reports, 1928-29, 1929-30 and 1930-31, the quantities of the various staple lengths produced in the United States and in each of the principal cotton-producing states.

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* Credit is due to A. W. Palmer, in charge, Division of Cotton Marketing, under whose general supervision the work of this survey was conducted; B. Youngblood, who planned the survey and directed it in its beginnings; J. T. Egan, who supervised the field work; J. L. McCollum and F. E. Nelson, who assembled the data; Marguerite Dodson, who prepared the charts; and Florence Cleaves, who arranged the material for publication.

TABLE I.—STAPLE LENGTH OF AMERICAN UPLAND COTTON BY STATES, CROPS OF 1928, 1929 AND 1930:—

State	Crop year	Total 1,000 bales	Shorter than $\frac{7}{8}$* in. 1,000 bales	$\frac{7}{8}$ and $\frac{29}{32}$ in. 1,000 bales	$\frac{15}{16}$ and $\frac{31}{32}$ in. 1,000 bales	1 and $1\frac{1}{32}$ in. 1,000 bales	$1\frac{1}{16}$ and $1\frac{3}{32}$ in. 1,000 bales	$1\frac{1}{8}$ and $1\frac{5}{32}$ in. 1,000 bales	$1\frac{3}{16}$ and $1\frac{7}{32}$ in. 1,000 bales	$1\frac{1}{4}$ in. and longer 1,000 bales
All States ..	.. 1930†	13,732·2	1,829·2	5,327·7	3,421·6	1,725·9	970 9	393·3	60·8	2·8
	1929†	14,519·0	2,921·5	5,533·7	2,748·2	1,603·6	938 6	556·1	119·4	7·9
	1928†	14,268·2	2,072·1	5,914·8	3,225·7	1,575·8	794·2	489·2	167·9	28 5
Alabama ..	.. 1930	1,444·9	553·3	802·2	77·1	9 2	2 5	·6	—	—
	1929	1,307·7	585·6	689·0	28·3	3·3	1 4	·1	—	—
	1928	1,096·6	264·2	762·6	49·8	17·6	1·8	·5	·1	—
Arizona ..	.. 1930	127·2	3	5·5	41·2	47·8	29 6	2·8	—	—
	1929	120·7	1·5	4·3	27·4	65·3	19·4	2·8	—	—
	1928	117·4	2·6	11·3	17·6	40·2	42 7	3·0	—	—
Arkansas ..	.. 1930	863 5	76·9	196·1	252·9	206·8	106·6	22·4	1·7	·1
	1929	1,395·9	177·9	393 4	379·1	261·9	128 0	45·4	8·6	1·6
	1928	1,216·2	127 0	359·4	290·5	223·6	130·6	65·9	16·9	2·3
California ..	. 1930	256·3	—	1·7	13·9	41 2	160·0	39·2	·3	—
	1929	254·1	·8	5·0	17·1	119·6	104 2	7·4	—	—
	1928	171·0	2·8	20·5	29·3	47·6	60·0	10·8	—	—
Florida ..	.. 1930	51·1	10 1	34·9	5·8	·3	—	—	—	—
	1929	29·8	11·1	17 2	1·2	·2	·1	—	—	—
	1928	20·1	2·3	14·5	2·6	·4	·2	·1	—	—
Georgia ..	.. 1930	1,597·5	237·1	1,096 8	218·4	36·3	7·3	1 4	·2	—
	1929	1,339·8	282 2	918 8	113·7	21·3	3 6	·2	—	—
	1928	1,053·2	129·5	748·9	144·1	28·3	5·4	1·4	·6	—
Louisiana ..	.. 1930	704·8	91·3	160·1	167·4	186·8	67·2	28·0	3·8	·2
	1929	797·7	110·6	205 5	212·7	170·4	63·7	29·6	5·0	·2
	1928	685·9	88·3	208 1	178 6	127·6	52 1	27·7	7 8	·7
Mississippi ..	.. 1930	1,458·5	114·9	299·2	264·5	209·4	312·9	216·6	39·4	1·6
	1929	1,876 0	189·7	352·3	227·0	202·7	388·9	412·4	97·7	5·8
	1928	1,462·0	254·3	258·9	111·9	127·8	259·8	305·9	121·7	21·7
Missouri ..	.. 1930	153·3	11·2	56·0	55·6	22·4	7·1	1·0	—	—
	1929	220·9	3·1	57·5	88·4	56·2	13·7	1·8	·2	—
	1928	146·9	8·8	30·2	52·2	39·3	14·3	1·7	·4	—
New Mexico ..	.. 1930	95·8	·5	1·3	7·8	35·6	42·5	8 0	1	—
	1929	86·3	4 8	2·7	6·3	40·2	27·7	4·6	—	—
	1928	82·2	4 9	6·2	8·6	22·1	34·0	6·4	—	—
North Carolina	.. 1930	800·6	40·4	410·2	236·5	81·6	25·6	5·6	·7	—
	1929	767·0	81 9	479·4	151·2	45·7	7·0	1·5	·3	—
	1928	869·3	87 1	605·5	129·7	30·5	9·0	4·9	2·2	·4
Oklahoma ..	.. 1930	856·8	126·7	348·6	295·1	71·6	12·2	2·5	·1	—
	1929	1,125·6	321·5	500·1	207·9	67·1	22 6	6·1	·3	—
	1928	1,187 0	162·3	421·7	395·5	172·3	25·3	8·2	1·6	·1
South Carolina	.. 1930	1,015·3	26·9	426·0	288·6	140·1	83·9	38·4	10·6	·8
	1929	833·1	93·1	440·4	157·4	81·0	42·6	14·4	3·7	·5
	1928	744·4	51 8	409·9	144·9	68·5	33·9	23·4	9·6	2·4
Tennessee ..	.. 1930	371·4	59·7	128·1	123·8	48·0	11·0	·8	—	—
	1929	504·3	80·0	173·4	163·8	74·9	10·3	1·6	·3	—
	1928	423·5	88·0	173·0	108·0	42·1	10·4	1·4	·5	·1
Texas ..	.. 1930	3,886·1	475·5	1,330 4	1,363·2	586·3	101·0	25·7	3·9	·1
	1929	3,803·2	974·2	1,260·5	955·9	480·8	103·2	26·0	2·4	·2
	1928	4,941·5	794·6	1,856·8	1,557·1	586·8	113·0	26·9	5·8	·5
Virginia ..	.. 1930	42·7	3·9	29·6	8·4	·7	·1	—	—	—
	1929	48·0	3·3	34·1	9·7	·8	·1	—	—	—
	1928	44·8	2·8	37·1	4·7	·2	—	—	—	—
All others ..	.. 1930	6·4	·5	1·0	1·4	1·8	1·4	·3	—	—
	1929	8·9	·2	·1	1·1	2·2	2·1	2·2	·9	·1
	1928	6·2	·8	·2	·6	·9	1·7	1·0	·7	·3

*Untenderable in settlement of futures contracts made subject to Section 5 of the United States cotton futures act and the regulations of the Secretary of Agriculture thereunder.

† Compiled from data reported by the Bureau of the Census.

When the cotton grown in a given locality averages, say, $\frac{7}{8}$ in., considerable quantities of the ginnings obviously will be of the various staple lengths longer and shorter than the average. The following percentage distributions by staple length are those of two typical gins co-operating with the Bureau in this survey, whose ginnings during the 1930-31 season averaged $\frac{7}{8}$ in. and 1 in respectively.

	Per cent.	Per cent.
$\frac{13}{16}$ in and under	5·6	0·1
$\frac{7}{8}$ in.	61·0	1·5
$\frac{15}{16}$ in.	27·4	14·0
1 in.	4·6	49·1
1 $\frac{1}{16}$ in and over	·5	35·3

Information collected shows that staples shorter than $\frac{7}{8}$ in. predominate in three rather well-defined areas: (1) The north-western part of Texas and directly north of the Red River in south-western Oklahoma; (2) north-east Texas, south central Arkansas, and adjoining counties in north central Louisiana; and (3) north-eastern Mississippi, northern Alabama, and adjoining counties of Tennessee. Much of the cotton produced in southern Alabama is of these short staples, and some cotton of these lengths is produced in the extreme north-western and south-eastern parts of Georgia. With few exceptions, scattered gins ginning staples averaging less than $\frac{7}{8}$ in. were found in all parts of the Cotton Belt. Notable among the exceptions are the Mississippi Delta and the irrigated sections of the Far West.

$\frac{7}{8}$-IN. STAPLE.

Cotton $\frac{7}{8}$ in. in staple is the predominant length in each of the states with the exception of Mississippi and the Far-western States. Attention is called to the prevalence of gins averaging $\frac{7}{8}$ in. in staple (1) throughout the Black Belt of Texas and from the northern boundary of Arkansas southward and south-westward almost to Corpus Christi; (2) in the areas of greatest production in Texas, Oklahoma, Georgia, and the Carolinas; and (3) in all parts of Arkansas except the river bottoms. Gins averaging $\frac{7}{8}$ in. in staple are scattered also over many areas where this is not the predominant length of staple—over all of Mississippi except the Delta, and throughout Alabama and the cotton-growing sections of Florida and Virginia.

$\frac{15}{16}$-IN. STAPLE.

Gins ginning cotton with an average staple of $\frac{15}{16}$ in. are scattered rather generally over the central and west central portion of the Cotton Belt and over much of the cotton-producing sections of the Carolinas. They are most abundant (1) throughout the Black Belt of Texas, especially in the north-eastern and south-eastern parts of the State and along the coast as far as the Rio Grande; (2) on the low lands skirting the Delta and following the courses of the Arkansas and Red Rivers and other streams tributary to the Mississippi through Oklahoma, Arkansas and Louisiana; and (3) in northern South Carolina and adjacent counties of North Carolina. These are all areas of heavy production.

1-IN. STAPLE.

As a rule, the gins located in California, Arizona and New Mexico, and in the irrigated sections adjacent to El Paso in Texas, show an average staple length of 1 in. Cotton of this length is produced in considerable quantities on the bluffs adjacent to the Mississippi Delta and in the low lands along the Mississippi, in eastern Oklahoma, in the Coastal Plains of Texas, and in north-eastern South Carolina

STAPLES $1\frac{1}{16}$ INS AND LONGER

Practically all of the co operating gins ginning cotton $1\frac{1}{16}$ ins and longer are located in the Delta section of Mississippi and in Eastern Arkansas These areas are the heaviest producing areas of these states Very few gins ginning these staples in greatest abundance were found in other cotton growing areas As a matter of fact, the predominating staple length of the co-operating gins in the Delta of Mississippi is $1\frac{1}{8}$ ins , practically no gins are found in other parts of the country where the predominating staple length is as long as $1\frac{1}{8}$ ins

GENERAL

The figures indicate that cotton averaging $\frac{7}{8}$ in or shorter in staple length predominates in all sections of the Cotton Belt, except the Mississippi Valley, that cotton averaging from $\frac{15}{16}$ in to 1 in , inclusive, is produced chiefly in the central and west central part of the Belt and in the irrigated sections of the Far West, and that cotton averaging $1\frac{1}{16}$ ins or longer in staple is produced chiefly in the Delta of the Mississippi

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Digest of Farm Relief Plan.

The general objective of the Bill is to increase the purchasing power of farmers by restoring the balance between production and consumption and by adjusting markets as rapidly as is feasible, starting with present conditions.

The Bill gives the Secretary of Agriculture broad powers:—

(1) To provide for reduction in acreage or production of specified farm products and to compensate producers for such reduction through rental or benefit payments.

(2) To enter into marketing agreements with producers, marketing agencies, and processors of farm products.

(3) To license processors and distributing agencies engaged in interstate or foreign commerce in handling agricultural products and to regulate them so as to eliminate unfair practices and charges.

(4) To use the Smith cotton option contract plan on the 1933 cotton crop.

(5) To impose taxes on the processing of the basic agricultural commodities at an amount not in excess of that necessary to restore the pre-war price parity, subject to the limitation that the tax shall be reduced if the full amount is more than can be borne under existing conditions without excessive reduction in consumption.

It is intended under this broad grant of power that the Secretary will call in representatives of the producers and processors for each commodity and shall work out separately for each commodity the method of dealing with it which offers the best hope of effective control of production for the 1933 crops and of progressive action towards an elimination of surplus stocks or production and restoration of normal price parities.

Under the taxing power, provision is made for hearing to interested parties so that in each step of the application of the law the Secretary will discuss the proposed steps with those interested and will take into account their expert advice.

In controlling production of different commodities different systems will probably be used. Thus it is anticipated that in the case of hogs and corn the payment of rent for retirement of corn land from production will be contingent upon a corresponding reduction in the quantity of hogs marketed by the producer. In the case of cash crops the rental or benefit payment may be based primarily upon reduction in acreage of the particular crop in question, with supplementary provisions as to the alternative use of the land. Under the plan the Secretary is also at liberty to rent land in large tracts or in selected regions, or to allot the sums for land rentals by states and counties so that each producer will have an equal opportunity to rent a portion of his land and to receive rental payments.

Provisions are included for taxes on the existing warehouse stocks at the time the processor's tax goes into effect and refunds on the exportation of the finished products upon which processing taxes have been collected and for the imposition of such taxes as are found necessary on commodities or products competing with the basic agricultural commodities or their products Commodities used by unemployment relief agencies are exempt from taxation Through these and other special provisions it is hoped that the tax can be applied with the least possible necessity for adjustment in the various industries and without injustice to the various individuals and concerns involved, so that in every way the addition of the tax will work out in the same way as an increase in the price of the product itself

In practically all cases the percentage of the retail price which now goes to the farmer is so small that the addition of the tax will have only a very slight effect on the retail price It is anticipated that that part of the tax which is added to the retail price will not be burdensome to consumers At the same time by increasing the funds available in rural communities and thus increasing the assets behind the rural banking structure and increasing the purchasing power of farmers for industrial products it is expected that there will result an increase in city industrial activity As this develops the increased activity will eventually provide city workers with an increase in income which will be far greater than the relatively small increase in their cost of living

The basic products to which the Act applies are wheat, cotton, corn, tobacco, rice hogs, cattle sheep, and milk and its products In practically all cases these products are now selling at retail far below the cost of other items of food and the prices of goods and and services which consumers buy The Bill specifically states that the Act is not to be so administered as to advance the retail price of the products affected out of line with the price of other products

The President may terminate the measure whenever he finds that the existing emergency in relation to agriculture has been ended

NEW HEAD OF FEDERAL FARM BOARD.

Mr Henry Morgenthau, jun , was recently appointed Chairman of the Federal Farm Board by President Roosevelt in succession to Mr James C Stone For many years Mr Stone has been actively engaged in co operative marketing He was Vice-Chairman of the Farm Board until Mr Legge retired from chairmanship

Mr Morgenthau was formerly State Conservation Commissioner of New York and head of the New York State Agricultural Advisory Committee under President Roosevelt then Governor of New York He has the reputation of being thoroughly familiar with the problems of agriculture

The new Farm Board chairman advocates a commission to take the place of the Farm Board, and favours putting all Government agencies which are now dealing with agricultural credit into a separate department

Immediately after taking office the new chairman said, in speaking with reference to co-operative marketing that plans are to continue to make loans to co-operatives, and that a special division of his department would have direct supervision over co-operative loans

Mr Morgenthau is reported to have stated that it would be his policy to wind up stabilization activities as quickly as possible, and indicated that he would be opposed to any further effort toward stabilization

Dr W I Myers, of Cornell University, has been named the Vice Chairman of the Board

AMERICAN COTTON STANDARDS.

European and American delegates to the Universal Cotton Standards Conference, which met at the Department of Agricuture on March 13 have completed the examination and approval of sixty five sets of copies of the standards for use during the next two years by the Department of Agriculture and by the arbitration appeal committees of the principal cotton associations of the world, conforming to the provisions of the agreements under which the biennial conferences are held No changes were made in the standards

The Department of Agriculture announced that it would make a comprehensive study of the standards situation with a view to determining whether and to what extent revisions of the standards may be desirable

Users of the standards promised to co operate in this study, the results of which it is contemplated will be presented to interested groups before further action is taken

No action was taken on the request by the European associations that the Cotton Standards Conference be held and copies of the standards drawn, once every three years instead of biennially as now provided by the agreements, since the Departments of Agriculture and the representatives of the American industry considered the proposal undesirable at this time

Attention was directed to the department's technological work at the experimental cotton gin at Stoneville, Miss , which seeks to develop better ginning methods which will improve cotton quality with respect to eliminating dust and other foreign substance European delegates voiced objection to the use of sisal bagging on baled cotton, asserting that the wrapper has no reuse value, and that the sisal fibres impair the quality of the cotton yarn and are the cause of difficulties in manufacture

Representatives of nine associations in seven European countries and of two Japanese associations were in attendance

The sets of standards about 60 key sets, were approved for use for the next two years for American and foreign exchanges for arbitration purposes and classifications for deliveries on futures contracts

It is understood that the Department was left with the suggestion that it modify tentative sets of the standards which will more nearly represent the crop in recent years At a subsequent meeting it is hoped to arrive at an agreement on such modifications It will probably be a year before the next meeting, however, and the modifications would not be effective until one year after an agreement has been reached and the new standards promulgated

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U.S.A.—EXPORTS OF RAW COTTON.

Exports from United States of America by Countries	Season Aug 1, 1932, to March 24, 1933 (000's omitted)	Same time last year (000's omitted)
Great Britain	1,056	966
Belgium	146	111
Denmark	24	23
France	691	316
Germany	1,327	1,245
Holland	99	119
Italy	584	517
Norway	7	5
Poland	95	10
Portugal	46	39
Spain	220	200
Sweden	43	38
Other Continent	4	2
Japan	1,293	1,950
China	235	869
India	49	155
Canada	125	131
Mexico, etc	33	8
Total	6,077	6,704

GEORGIA'S COTTON HOLIDAY.

According to press advices from Atlanta, a Bill has been introduced in the Georgia Assembly with the approval of the House and Senate which provides for a cotton holiday, making it illegal to plant cotton in that state between January 1, 1934, and December, 1934, in order to eradicate and control boll-weevil, pink boll-worm, black-root, and other insect and plant diseases. The Bill would prohibit the planting of any cotton-seed, cultivation of any cotton-plants, or the gathering of any cotton-lint or seed in the state.

SMALLER PROPORTION OF UNTENDERABLE COTTON.

According to recent information cabled from America, the United States Department of Agriculture reported that the crop of 1932-33 contained 11,500,000 bales of tenderable cotton, so that the proportion of untenderable cotton was the lowest for any season since the grade and staple reports were introduced. The quantity of tenderable cotton produced this season, moreover, was nearly 500,000 bales more than in 1929-30, though total production was some 1,800,000 bales smaller. The position is illustrated in the following table, which shows for each of the last five seasons the total ginnings and the amounts of tenderable and of untenderable cotton:—

	000's omitted			Untenderable to total
	Total Bales	Tenderable Bales	Untenderable Bales	per cent
1928–29	14,297	11,658	2,539	17·8
1929–30	14,548	11,027	3,521	24·2
1930–31	13,755	11,645	2,110	15·3
1931–32	16,629	14,867	1,762	10·6
1932–33	12,703	11,500	1,203	9·4

CROP REPORTS.

Messrs. Weil Brothers, Montgomery, Alabama, in their semi-monthly crop letter, dated March 16, 1933, give the result of a questionnaire sent out to their correspondents over the whole Cotton Belt as follows:—

North Texas: Farm work, very little done. Not late, usual average condition. Weather too cold and wet. Increase in acreage probably 5 per cent. Implements and mules same as compared to last year. Fertilizer, none used. Labour plentiful. No planting to date.

West Texas: Farm work, none so far. Weather conditions, cold and wet and unfavourable. Prospective increase in acreage 8 per cent. Mules and implements same as last year. Fertilizer, none used. Labour plentiful. No planting thus far.

East Texas. Farm work usually begins March 1 to 15, nothing done to date. Weather unfavourable and wet. Acreage same as last year. Implements and mules in comparison with a year ago about unchanged. The use of fertilizer, usual small amount. Labour plentiful. No planting thus far.

South Texas. Farm work to date normal for cotton. Weather favourable and dry. Increase in acreage 8 per cent. Mules and implements plentiful. Fertilizer, none used. Labour plentiful. Thus far considerable planting done.

Oklahoma: Farm work, none so far, but a late start usual. Weather unfavourable to March 3, favourable since. Estimated increase in acreage 7 per cent. Mules and implements about same as last year. Fertilizer, none used. Labour plentiful. No planting so far.

Arkansas and West Tennessee and parts of Louisiana: Farm work backward because of wet weather, some indifference, lack of funds. Expected that seed loans will soon be available. Estimated increased acreage 6 per cent. to 9 per cent. Implements same as last year. Mule shortage account emigration from towns to country. Fertilizer, practically none used. Labour plentiful. No planting thus far.

Mississippi and parts of Northern Louisiana. Backward condition due to lack of funds from Federal Agencies, inability to secure loans from banks or Merchants, and excessive moisture in soil. Weather last few days good. Five per cent. acreage decrease predicted except in Delta, where 6 per cent. to 10 per cent increase looked for. Slight decrease mules and horses due normal death rate and no replacements. Farming implements can be repaired. Decreased use of fertilizer, owing to restricted credits. To date little land broken, none planted. Sufficient farm labour available.

Alabama and Central Tennessee. Farm work, two or three weeks late—too frequent rains and too wet. Last ten days favourable, this dry spell has been used to advantage by farmers. Acreage, 5 per cent. average increase anticipated. Implements being repaired, necessity forcing this economy. Some farmers replacing and buying mules, others unable to secure funds for this purpose. Fertilizer decrease indicated unless financial assistance secured. Labour plentiful, one district reporting a surplus. No planting done thus far, even in southern parts.

Georgia: Farm work near coast 10 days late, central 15 days, northern 20 days—average 15 days late due to excessive rainfall. Weather conditions this month more favourable but ground still so wet that several days clear weather required before farmers can get into fields. At present increase of 5 per cent. to 8 per cent. possibility. In central Georgia, around Augusta, more mules sold to replace worn out stock than in four or five years. Where mules died, many not replaced—some farmers having none at all. More farmers willing to work than can be supplied with mules. Scarcely any replacements of farming implements, but repairing instead. Fertilizer decrease predicted due to scarcity of funds. Labour plentiful.

North Carolina and South Carolina : Farm work, most sections normal, some backward. caused by too much rain during the past three months. Weather for ten days dry and favourable South Carolina acreage estimated same as last year. North Carolina 5 per cent. increase. Mules and implements sufficient. Fertilizer decrease likely. Labour very plentiful. No planting done thus far.

All reports from the various states agree that there will be large food and forage crops planted. Farmers have sufficient food and feed to carry them through the making of the present crop.

Messrs. Weil Brothers, Montgomery, Alabama, in their semi-monthly crop letter dated April 3, 1933, state as follows:—

Reports from our correspondents indicate that moisture in the soil, with the exception of west Texas and the Rio Grande Valley, designated as south Texas, is sufficient and will prove beneficial—it is a condition that will germinate the seed very rapidly once it is planted.

The average of the entire cotton belt · Farming operations are two weeks late as compared to normal. The weather has been favourable during the past two weeks and much farm work has taken place.

Planting has been completed in south Texas except in the extreme northern portions; cotton is up and stands are fair to good. In the extreme southern part of Alabama, Georgia, and South Carolina there is a small proportion of planting thus far. But there is every indication that the central and southern portions will start planting on April 1 and the northern portions in the latter part of April.

As to acreage, reports indicate at this time that there will be an increase in Texas, Arkansas, Louisiana and Tennessee of 6 per cent. to 8 per cent. —in Oklahoma, all the way from 10 per cent. to 20 per cent., and in the balance of the belt an average of 4½ per cent. Circumstances may change these forecasts—notably the developments at Washington.

There has been a spasmodic demand for cotton. The turnover, as a whole, this past month proved to be significant inasmuch as volume was rather large. Mill activities in the United States have been on the increase so it would seem, and consumption of American cotton the world over indicates, judging from present conditions, that there will be an increased consumption as compared to last year.

Below we give you fertilizer figures (in tons) from December through March. It will be well to note that fertilizers are cheaper this year than last year—probably by $4.00, $5.00 or $6.00 a ton.

	1928–29	1929–30	1930–31	1931–32	1932–33
North Carolina .	763,202	728,391	545,519	265,773	359,944
South Carolina ..	552,796	509,175	363,169	254,259	300,096
Georgia .. .	656,100	661,706	508,406	210,752	96,000
Alabama	447,300	434,300	239,000	100,850	111,700

The Fossick Bureau, Memphis, Tenn., write as follows under date of March 31:—

New cotton crop preparations made better progress during the week than in any previous week this season. Reports indicate that, for the belt as a whole, about 33⅓ per cent. of the lands intended to be planted to cotton have been prepared. With the time for beginning of general planting only about two weeks off, much less land has been prepared than in an average year.

Two weeks of perfect weather would enable the farmer to catch up. Any further delay would mean a late start.

Showery weather during the last 24 hours stopped field work over wide areas east of the Mississippi River and in scattered localities west of it. Heavy storms occurred in Texas.

Planting is well advanced in southern Texas Perhaps less than average progress has been made in southern Georgia and in Gulf sections of Alabama and Mississippi but a moderate amount of seeding has been accomplished A few scattered acres have been planted as far northward as Memphis

The acreage prospect is not yet clear Bills now pending before Congress will be too late, if enacted, to affect this year's acreage Doubts are openly expressed that pledges required of recipients of seed loans to reduce 30 per cent, will have any appreciable effect on acreage The general idea, based on intentions to plant, is that acreage will be increased 5 to 10 per cent

It is expected that the largest increases will be made in Texas and Oklahoma Reports indicate a slight decrease to an increase of 15 per cent, in the central belt, according to locality In the eastern belt it appears that the acreage will be about the same as last year to a slight increase

It is noticeable that the largest increases are expected in sections which were free, or relatively free, of boll weevils last year and where fertilizer is not considered an absolute necessity

A later communication from *The Fossick Bureau* states that delays in getting the crop planted may have an effect later on the acreage but this will depend on the weather during the next sixty days There is still plenty of time, if the weather does not interfere too much, for intentions to plant to be fully carried out Ideas as to intentions to plant are crystallizing on an increase of 5 to 10 per cent, compared with last year It is not possible to state at this time what this would represent in number of acres government's final estimate on last year's acreage will not become available until May 22 Government's first estimate on the new crop acreage will be due July 8

CROP LETTERS.

We have recently received the following crop information from *The American Cotton Crop Service*, Madison, Florida —

Practically all early season reports point to an increase in Texas cotton acreage during the coming season However, variation in yield per acre is vastly more important than the limited change that will probably occur in acreage Our correspondents indicate considerable acreage being planted to cotton in South Texas, where truck crops were damaged by recent cold weather From other sections of the state crop reporters affirm that feed crops are abundant and are practically worthless from a cash crop view point Therefore cotton offers a better cash outlook to growers than any other crop, even at present low price levels Texas crop reporters, like those in other Cotton Belt states, are disposed to smile indifferently at the " farm leasing " plan

Moisture supply is the chief limiting factor in Texas cotton production Precipitation between October 1, 1930, and March 1, 1931, averaged about six inches above normal, and the yield was 165 lbs per acre compared with the 10 year average of 126 lbs For the same period in 1931 32 precipitation was again about six inches above normal, and yield per acre was approximately 155 lbs Between October 1, 1932 and March 1, 1933, average precipitation was approximately 1 7 inches below normal We believe the abundance of winter rainfall stored in the subsoil for the past two years largely responsible for the high yields of cotton in Texas during 1931 and 1932, and should average weather conditions prevail henceforth lower yield per acre may be expected in 1933

Early season farming operations in Oklahoma point to a very substantial increase in cotton acreage for the 1933 crop On account of poor returns from grain crops, especially wheat a considerable acreage now in wheat will be planted to cotton It is too early to interpret cotton acreage possibilities in quantitative terms, as an upward trend in the price of cotton would have considerable influence on the Oklahoma farmer's cotton intentions We quote herewith a late report from one of our most reliable Oklahoma reporters as follows. "It is too early to give you much reliable information relative to our 1933 cotton crop, but we can say that preparation is being made in most sections of the State for a considerable increase in acreage. In some sections of Western Oklahoma cotton acreage increase will be 20 to 25 per cent. over last year. Out West winter wheat has fared badly. Most of it was planted late, got a bad start, has had to endure terrific wind and sand storms, plus sub-zero weather, with the result that many fields are practically ruined. Very little of this abandoned wheat acreage is going to oats. A great deal of it will be planted to cotton.

"On the east side of the state we do not expect much change in acreage. There was considerable increase in cotton acreage on the east side the past two years on account of city-to-farm movement. Most of the formerly abandoned farms on the east side were settled last year or the year before.

"Taking the state as a whole, we believe the 'intentions to plant' at this time will amount to 7 to 10 per cent. over last year. There is an active inquiry and considerable demand for pure planting seed. We carried over 7,000 bushels of certified planting seed from last season, and we have sold nearly all of them during the past month. This is unusually early for planting seed movement in this country. As a rule, farmers wait until they are ready to plant before they look around for seed.

"Most of our farmers are of the opinion that 5-cent cotton makes more money than 12-cent oats or 30-cent wheat. The outlay for farming machinery to handle cotton is so small that almost anyone can equip to take care of a small acreage. Lots of former idle land will be planted to small plots of cotton.

"Our farmers and ginners look for a large crop of cotton this season, basing their opinion on soil conditions and the sub-zero weather we had in February. They anticipate little damage from the weevil, and with favourable planting, growing and picking seasons Oklahoma should produce a large cotton crop."

A later communication from *The American Cotton Crop Service* states that flood waters in the Central Belt, caused by recent heavy rainfall, are not expected to prove a serious handicap to the 1933 cotton prospect. The crest of the Mississippi River flood is expected to pass southward in time for the draining and planting of most cotton lands now inundated. Cotton culture in the Mississippi River delta on lands not protected by levees usually depends on the relative earliness of spring floods. When high waters occur late in the spring farmers usually plant the land subject to overflow to grain crops. However, unless more rainfall causes another big rise in the rivers of the Central Belt, the present floods will recede in time for planting cotton on most lands not protected by levees.

During the current season temperatures have remained mostly near or below normal and weather conditions in general have not favoured rapid emergence of the weevil from hibernation. This factor is of considerable importance, as a good deal of cotton is now up to "stand" in the southern half of the Belt. With green cotton for food, a large number of the overwintered weevils are enabled to live until "squares" are developed on the plants in which the first weevil eggs are deposited.

Emergence of the weevil from hibernation begins when the daily temperature rises above a mean of 56° F. and continues well into the summer months. In the southern half of the Belt records from hibernation cage tests show that approximately 40 per cent. of all weevils that survive the winter leave their hibernating quaters by April 1.

The two main factors that determine the rate of emergence of the weevil from hibernation are temperature and rainfall. An excess of either factor without the required amount of the other does not accelerate emergence from hibernation. To date rainfall or moisture has been ample for normal emergence, but temperatures have been mostly too low to stimulate a very rapid emergence of the pest from hibernation.

Fertilizer tag sales in the twelve cotton-growing states during March were for 822,485 tons of commercial fertilizer, or 129 per cent. of the sales of 639,646 tons during March, 1932. The total number of fertilizer tags sold in these states during the first three months of this year was for

1,324,189 tons of commercial fertilizer compared with sales of 1,173,124 for the same period last year or an increase of 13 per cent. The main increase in tag sales occured in the Atlantic States where heavy increases in tobacco and truck crop acreages are expected. It has been estimated that about 60 per cent. of the commercial fertilizer sold in the south is used under crops other than cotton.

Crop reporters in the Southeastern Belt indicate control of the weevil by use of arsenical poisons will be more generally practised this year than usual. For the past two years the "Depression" and resultant low prices for all farm commodities so discouraged farmers that very little effort was made to poison the pest. In the southern half of the Belt weevil activity is always to be reckoned with in cotton growing as winter temperatures seldom cause any considerable mortality among weevils in hibernation. Late reports, however, state that, on account of renewed hope for higher cotton prices as outlined in the "Roosevelt Farm Relief Bill," farmers are planning to use much larger amounts of arsenical poison for fighting the weevil during the coming season.

The number of boll-weevils produced per bale can be estimated, according to recent reports from the United States, by running the trash which is usually conveyed on to some pile in the backyard of the gin, through a machine which will show just how many weevils have been brought to the gin—their size, description, age and so on.

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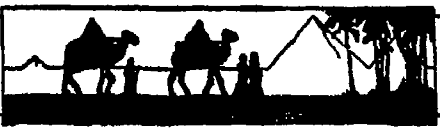

EGYPTIAN COTTON

ALEXANDRIA TESTING HOUSE CHARGES

We publish below the list of charges issued by the Alexandria Testing House The list came into operation on January 23 last and will continue until further notice —

		Hydraulic Bales		Steam Pressed Bales	
Number of Bales in Lot	Number of Samples to be drawn	Rate of Conditioning Fee per Sample P T	Total Charge per Lot P T	Rate of Conditioning Fee per Sample P T	Total Charge per Lot P T
1 to 10	1	40	40	50	50
11 20	2	35	70	45	90
21 30	3	30	90	45	135
31 40	4	27 5	110	40	160
41 50	5	25	125	40	200
51 60	6	25	150	37 5	225
61 70	7	25	175	35	245
71 80	8	22 5	180	32 5	260
81 90	9	21 1	190	30	270
91 100	10	20	200	30	300

Hydraulic Bales Over 100 bales one sample per 10 bales at P T 20 each sample tested Drawn sample tests P T 40 per sample tested Delivered sample tests P T 30 per sample tested Weights Bale weights to be taken (at time of drawing samples by clients own weighers using Testing House balances Records of bale weights will be taken by Testing House officials

Steam pressed Bales Over 100 bales one sample per 10 bales at P T 30 each sample tested Drawn sample tests P T 50 per sample tested Delivered sample tests P T 30 per sample tested Weights Bale weights to be taken (at time of drawing samples) by the pressing companies weighers The pressing companies official weight notes will usually be accepted by the Testing House officials

Developments in Cotton Cultivation. Sakel and Its Seed Supply.

By Dr W LAWRENCE BALLS F R S

The Manchester Guardian Commercial recently published the following interesting article, written by Dr W Lawrence Balls, Member of the Joint Egyptian Cotton Committee —

" During the past few years there has been so much activity in research on Egyptian cotton that the resources available are inadequate to deal even with applications of immediate practical importance, especially so in the problems of soil fertility and its deterioration under the influence of water-logging In these subjects a combination of observations on sub soil water movements with parallel analyses of sub soil water composition is linking up with studies of soil-profiles, soil bacteriology, and the geology of alluvial deposits

A practical inference from these researches, which is a safe one even in their present incomplete form, is that the importance of local drainage applied to individual acres has previously been underestimated An available method of tile drainage suited to Egyptian soil conditions is consequently attracting more and more attention, while it may also be found worth while to attack the problem from the other end by preventing ingress of water This would mean enormous expenditure on the lining of high-level canals, which has previously been considered uneconomic for Egypt, and much more knowledge of the chemical and biological machinery of deterioration must be acquired before such expenditure can be confidently recommended as a business proposition of the nature of insurance against future extensions of deterioration

In the actual cultivation of cotton there have been notable improvements, which take the form of adapting the operations of the grower to the new conditions brought about by the pink boll worm The ordinary cultivator has been feeling his way in the same direction by small changes from year to year, but the experimental investigators have been able to get there in one jump Essentially the change consists in trying so to cultivate the crop that as many as possible of the early flower-buds ripen into bolls The three chief methods available for doing this, without appreciable additional cost to the grower, are sand sowing, early watering, and close spacing The net result is exemplified by the Giza Experimental Farm, which for years has been considered five kantar land, but now gives seven, while parts of it have exceeded nine The last figure has not been reached on this land since 1900, when the growing-season extended into November, there being no pink boll-worm

The seed supply of Egyptian cotton is worked, as is now well known, on a double-ended system The law which compels the inspection of every sack of seed before it may be used for sowing

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is one end, State propagation of renewal stocks of pure seed every year is the other The seed control law prunes away bad seed, making room for the renewal supplies of good seed The renewal of Maarad, Pilion, and Fuadi is not in the hands of the Government, and Pilion (which is quite uncontrolled) would by now have been hopelessly contaminated if its worst stocks had not been pruned away On the other hand, the stocks of Sakel (with its wilt-proof form called Sakha 4), of Uppers, and of Giza 7 are under complete control until about one-tenth of the total area of each variety has been planted The Government have been urged by some keen growers to retain full control of Giza 7 up to the last grain of seed, in order to prevent dishonest mixing, but this is impracticable

New strains are continually under test with the object of obtaining better yield and better quality, but there is no need for haste in the introduction of these, unless something of conspicuous merit is obtained The introduction of Giza 7, which yields more than Sakel in the ratio of 11 7, and is scarcely inferior to Sakel in twofolds, is sufficient for the moment Its market has been steadily improving in spite of a bad initial reception last year, as the consumers have verified its intrinsic merits, which were carefully ascertained before its introduction was attempted In this its history has been the converse of Sakha 4, which was introduced with cautionary warnings that it was a special-purpose cotton for the grower, and barely as good as Sakel for the spinner, but because it happens to be a superlatively " pretty " cotton to handle, it was received with unmerited enthusiasm, bought at boom prices, and is now being unduly neglected through reactionary prejudice

It is difficult to see how Sakel, *qua* Sakel, can survive over any large acreage in face of the high yield of Giza 7, Maarad, and Fuadi, and there can be little doubt that a few years will see it produced solely as a special purpose cotton, at a price high enough to compensate for its low yield, It is true that wilt-proof Sakels, similar to Sakha 4 will enable Sakel to be grown on rich soil, but even there they will still be at a disadvantage compared with Giza 7

We still hear occasional complaints about the quality of Sakel, which is said—as usual—to be depreciating on account of carelessness with its seed Now it happens to be the case, on the evidence of spinning tests and seed control statistics, not only that the basal seed-supply of Sakel is better than it has ever been in the past but that a far larger percentage of this good seed reaches the smallest growers The seed sold for crushing to-day is far better sowing-seed than we were planting five years ago The explanation of any inferiority in quality can therefore only be ascribed to inferior cultivation, due to the low prices obtaining during the crisis

The position of uppers is now quite satisfactory In the early years of the operation of the seed control law there was an extensive development of fraudulent practices (by means of false sampling) in Upper Egypt In one district this was carried so far that the seed was made worse by the law, instead of better Moreover, the practice was beginning to spread to the Delta, where two years of honest working were succeeded by fraud, but then by detection and remedy In Upper Egypt the position was much worse, but counter inspection, statistical study, and the construction of a secret black list has effected a cure, seed containing one per cent of Hindi contamination is now rare Meanwhile the pedigree stock of Giza 2, under the name of Ashmouni Gedid, has been multiplied, with yearly renewal, until there is now practicaly none of any other Ashmouni or Zagora stock left in Upper Egypt

An important line of research on breeding for spinning quality is likely to have useful applications in the Uppers crop Preliminary investigations have shown that fine staple strains can be isolated from the stock of Ashmouni Gedid without any change in the external appearance or behaviour of the plants Such improvements in fineness have further been shown to result in improved yarn strength, and it would seem that at least 20 per cent improvement is practicable But an interesting side issue of this will have to be dealt with, in that such cotton is not acceptable to the merchants, because it does not feel robust, resembling rather a sample of ordinary Uppers which has been badly cultivated

The establishment of an international agreement on the permissible moisture content for cotton exported from Egypt has led to the formation of the Alexandria Testing House, but in the present state of the market its operations are hampered by the relatively high cost of testing under the conventional system The writer's electrical method has now been further developed so that the readings are not confined to the surface of the bale, and the tests therefore need not be restricted to the time at which the bales are being pressed The extension of this much cheaper method to the testing of country bales from the interior is another line of development to be followed up

In general, even at present prices, the supremacy of cotton over other crops in Egypt, though often challenged, still holds good, and cotton is a paying crop for the landowner who can produce more than five kantars per feddan With its consistency from season to season Egyptian cotton at moderate prices will find a market against its challengers from other parts of the world, and the increasing yields per acre given by research are making it possible to keep those prices moderate'

LARGER COTTON ACREAGE EXPECTED IN EGYPT.

The 1933 cotton acreage in Egypt is expected to be from 30 to 50 per cent larger than in 1932, according to reports from Cairo The decree of October, 1932, limiting the cotton acreage to one half of the total cultivated area probably will be enforced, but the indicated increase in cotton would still be possible Present prices of cotton are not considered high, but they are better than a year ago Returns from cereals having been disappointing, apparently cotton is still favoured as the most profitable cash crop The acreage was 1,135,000 acres in 1932 and 1,747,000 acres in 1931 Private estimates for 1933 run from 1,557,000 to 1 816,500 acres

It is thought in some quarters that these estimates may be exceeded

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Ploughing started in areas left fallow or sown with temporary *bersim* Certain *dairas* (large estates) and big farmers in Middle and Lower Egypt have terminated the preparation of some areas Preparation of the land is considered early this year

Cotton ginned up to the end of January was as follows, in bales of 478 lbs net weight —

	1933	1932	1931	1930	1929
Sakellaridis	189 300	191 800	270 300	375 000	412 700
Other varieties above					
1⅜ inches	87 400	810 800	836 200	870 400	916 000
1¼ inches	59 800				
1⅛ inches	458 100				
Total	794 600	1 002 600	1 106 500	1 245 700	1 328 700
Scarto (linters)	18 500	26 200	26 600	28 700	37 200

MARKET LETTER.

The Egyptian Produce Trading Co, Alexandria, favour us with the following information, dated April 1 last, reviewing the month of March —

During the month under review markets were dominated by "outside" factors, first and most important of which was the financial crisis in America, leading to a general moratorium throughout the United States We consider that the new Administration deserves congratulations for its promptitude in taking measures which, although they have not yet solved the numerous thorny problems clamouring for attention have nevertheless prevented a catastrophe Negative in nature though this success may be, it provides considerable encouragement, more especially as the Democrats seem—at long last—to be facing the situation in an international as against the purely national spirit which has hitherto proved such an obstacle everywhere Unhappily conflicts of a political nature complicate the position and obscure the economic outlook everywhere

Increased interest was shown in our growths, and demand at times, was quite brisk News from Lancashire is rather disquieting, spinners continuing to complain bitterly of reduced margins, there is, however, a growing feeling that business, now merely latent, would be brought about if confidence were allowed to return It is hoped also that the revalorization of silver, initiated in the United States, will increase the buying capacity of Far Eastern countries The Continent was a fairly active buyer on the whole but mills in certain countries notably Spain, are experiencing difficulties in clearing off stock The Far East took but little of our cotton during the month

New crop acreage in Egypt promises to be very large Sakel will be grown exclusively in the zone reserved for this purpose in the Northern Delta, but in the remaining districts of Lower Egypt attention is being largely devoted to high yielding varieties Gizeh 7 seems to be a special favourite, and has been planted over an area exceeding 80,000 feddans, which may be expected to produce some half-million cantars Zagora is being widely cultivated in Lower Egypt, as well as Fouadi and Sakha 4 cultivation of Maarad has also been slightly extended. On the contrary, Pilion has been reduced by at least 25 per cent., whilst Nahda, which has so frequently disappointed our farmers, is being abandoned more and more.

Receipts since the beginning of the season amount to 4,348,426 cantars, and exports to 3,817,668 cantars, against 5,838,610 cantars and 5,018,494 cantars a year ago. Stocks in Alexandria now amount to 3,813,861 cantars against 4,888,724 cantars this time last season.

Spot Market. Sales during March averaged 1,870 bales daily against 1,908 the month before.

Demand for Sakel showed considerable improvement. Grades from F.G.F. downwards continue to be much sought after, and even those over F.G.F., which were neglected for so many months, are now much easier to sell, Gd./F.G. especially having been in considerable request. Generally speaking, good staples, especially in the case of medium and low grades, are scarce.

Interest was shown in Uppers, of F.G.F./Gd. class and under, the basis of which is steady, but higher grades are difficult to sell. The same remarks apply to Zagora.

Pilion is only available in small quantities, and styles up to F.G.F./Gd. are readily sold.

Maarad and Gizeh 7 were not in request, whilst supplies of Nahda and Fouadi are practically exhausted.

Insurers by Royal Appointment
to H.M. King Fouad I.

The Alexandria Insurance Company

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GOVERNMENT COTTON

Various advices from Alexandria report that the Egyptian Government has decided to sell weekly in the market of Minet el-Bassal 1,000 bales of Sakel by auction, out of its stocks

The first sale took place on April 19, and the result of this first auction shows the placing of 276 bales out of the 1,000 offered, offers were made for all the lots, but the Government would not dispose of this cotton at less than the limits it had fixed in advance

About 12,000 to 15,000 bales of Government cotton are reported to have been sold to a European tyre concern, according to local newspaper reports However, no official news of this transaction has been obtained so far

STATISTICS OF COTTON GINNED.

The official figures for the cotton ginned at the end of March, published by the Ministry of Agriculture, are as follows —

		Cantars		Cantars
Sakel		1 076 406	against last year	1 143 190
Variety	long staple	488 042		447 479
	medium staple	324 941		259 219
	short	2 546 787		3 862 048
Scarto		102 549		103 114
		4 538 725		5 865 050

COTTON STOCKS IN ALEXANDRIA.

The weekly bulletin of the Bourse de Minet-el-Bassal, dated April 21 last, contains the following statement —

COTTON

		Exports								
	Arrivals	England		Continent and other countries		U S A		Total		Stock
	Cantars	Bales	Cantars	Bales	Cantars	Bales	Cantars	Bales	Cantars	Cantars
This week 1933	71 300	4 494	33 051	7 966	59 128	475	3 540	12 935	[illegible]5 [illegible]14	3 698 907
Same week 1932	67 581	4 540	33 465	10 146	74 987	3 475	26 014	18 161	134 466	4 779 209
1931	102 938	5 127	37 695	11 408	84 518	845	6 214	17 380	128 427	5 035 361
Since 1st Sept 1932	4 528 253	194 095	1 428 371	338 242	2 505 701	24 059	178 377	556 396	4 112 449	—
Same period 1931	6 108 165	283 978	2 084 224	417 091	3 083 80[illegible]	30 136	224 538	731 200	5 392 564	—
1930	6 324 428	201 742	1 484 703	426 749	3 158 264	13 965	108 071	642 456	4 746 038	—

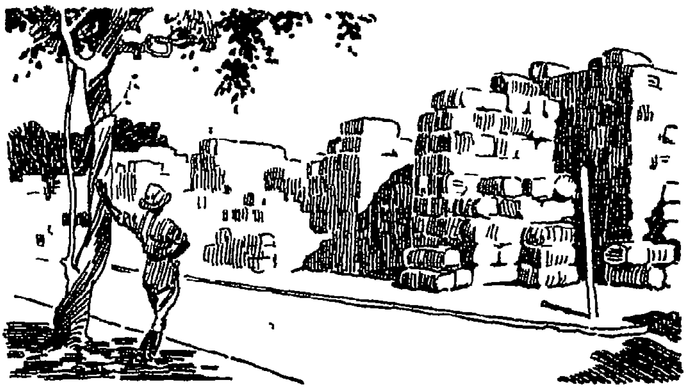
In this stock of 3,698,907 cantars are included 1,364,508 cantars net of cotton belonging to the Egyptian Government, of which 264,724 cantars sold locally and 42,270 cantars sold abroad have not been withdrawn The total amount of cotton unsold is composed of 594,523 cantars net of Sakel, 433,310 cantars net of Ashmouni-Zagora, 20,749 cantars net of Pilion, and 8,932 cantars net of other varieties

MARKET REPORT.

The Alexandria Commercial Co , in their weekly report, dated April 21, stated that weather conditions have become more or less settled, but the bad weather of the first half of the month has necessitated fairly heavy re-sowing The acreage continues to be generally estimated at 1,900,000 feddans. The supply of water is sufficient everywhere, and prospects are good for this continuing so for the coming summer months.

EXPORTS OF COTTON FROM EGYPT.

	SEP. 1st TO MARCH 31st,			
	Season 1932–33	Season 1931–32	Season 1930–31	Season 1929–30
Peel & Co	42,379	47,504	39,874	51,016
Carver Bros & Co	34,911	34,506	51,371	62,037
Soc. Misr (ex-Lindemann)	34,676	51,009	16,714	13,831
Alexandria Commercial Co.	30,504	48,784	34,144	40,993
Pinto & Co	24,868	28,228	7,964	15,388
Choremi, Benachi & Co.	20,656	29,295	30,576	42,533
Reinhart & Co	19,754	31,540	32,303	25,337
Cicurel & Barda	19,234	23,812	34,776	23,790
Planta & Co.	16,484	28,722	22,052	20,794
Eg. Prod Trading Co	15,127	24,606	24,367	16,227
Salvago, C M. & Co	14,301	9,829	15,484	11,283
Anderson, Clayton & Co	13,867	22,857	15,751	20,743
J. Rolo & Co.	13,617	15,500	15,483	21,290
British Eg. Cotton Co	13,466	14,821	14,590	12,983
Alby Albert & Co	12,982	9,085	9,935	8,102
Kupper, H.	12,833	16,146	13,819	13,389
Ah. A Farghaly Bey	12,057	13,370	13,545	7,509
Fenderl & Co.	11,516	22,163	12,799	11,301
Japan Cotton Trading Co.	11,365	14,840	9,955	5,435
Escher, W.	11,050	16,496	9,798	10,145
Soc. Cot. d'Egypte	10,686	10,956	9,010	8,866
Levy Rossano & Co.	10,374	9,835	5,518	2,504
Union Cotton Co. of Alex.	9,284	12,822	9,467	11,901
Psomadelis & Co.	8,704	10,140	8,672	4,691
Eg. Cotton Ginners & Exporters	7,758	6,037	2,860	2,334
Daniel Pasquinelli & Co.	6,955	7,263	6,356	5,463
Engel, A. & Co.	6,848	9,300	366	—
Getty, W. & Co.	6,788	13,813	9,641	9,717
Cotton Co.	6,536	8,745	559	—
Gregusci & Co.	6,477	8,805	10,279	12,942
Eastern Export & Co	5,738	12,230	9,009	9,851
Aghion Riquez & Co.	5,280	4,060	4,019	2,378
Francis Levy & Co.	4,998	2,702	6,110	2,348
Anglo-Continental Cotton Co.	4,514	5,490	9,124	5,751
Elia & Bibace	4,489	4,456	3,086	2,257
Zalzal, A.	3,776	5,428	1,514	—
Cambas & Co.	3,753	3,842	3,010	3,785
Rogers, E. P. & Co.	3,066	2,759	830	—
Casulli, M. S. & Co.	3,007	4,730	8,706	4,820
Riches, Acheson & Co.	2,787	—	—	—
Comptoir Cotonnier d'Egypte	2,781	3,239	5,367	6,576
Hess, A. & Co.	2,763	3,073	96	—
Joakimoglou, C. Z. & Co.	2,223	3,083	4,306	2,291
Yazgi, A. W.	2,082	604	—	—
Moursi Bros.	551	2,130	3,126	763
Rodocanachi & Co.	395	185	—	—
Banca Commerciale Italiana	251	—	—	—
Fr. Stabile & S. Salama	90	55	—	—
Sundry shippers	3,364	21,815	55,035	77,292
Total bales	521,965	680,710	601,366	610,656
Cantars net	3,857,550	5,018,505	4,442,545	4,508,859



East Indian Cotton.

Final Official Forecast on the Cotton Crop of 1932-33.

This memorandum is based on reports received from all the provinces and states and refers to the entire cotton area of India. It deals with both the early and late crops of the season. Information regarding the late crop in certain tracts, chiefly in Madras, Bombay and Hyderabad, is not, however, complete at this stage. A supplementary memorandum will therefore, as usual, be issued at a later date containing full and final figures for the abovementioned tracts together with revised estimates, if any, for other areas.

The detailed figures for each province and state are shown below:—

Provinces and States	Acres (thousands)		Bales of 400 lbs each (thousands)		Yield per acre lbs.	
	1932–33	1931–32	1932–33	1931–32	1932–33	1931–32
Bombay*	6,395	6,275	1,405	1,322	88	84
Central Provinces and Berar	4,216	4,620	740	496	70	43
Punjab*	2,268	2,541	622	615	110	97
Madras .. .	1,956	2,176	420	430	86	79
United Provinces* ..	527	753	170	207	129	110
Burma	320	228	62	34	77	60
Bengal†	76	75	24	17	126	91
Bihar and Orissa	65	68	13	14	80	82
Assam	37	37	15	15	162	162
Ajmer-Merwara	33	27	11	11	133	163
North-west Frontier Province	16	18	3	4	75	89
Delhi	2	1	1	2	185	169
Hyderabad	3,593	3,644	533	509	59	56
Central India	1,020	1,172	139	129	55	44
Baroda	722	693	124	136	69	78
Gwalior	597	632	76	76	51	48
Rajputana	419	436	57	62	54	57
Mysore	88	83	10	9	45	43
Total	22,350	23,482	4,425	4,088	79	70

* Including Indian States

The total area now reported is 22,350,000 acres, as against 23,482,000 acres, the revised estimate at this date last year, or a decrease of 5 per cent. The total estimated yield now stands at 4,425,000 bales of 400 lbs. each, as compared with 4,088,000 bales (revised) at the corresponding date of last year, or an increase of 8 per cent.

The condition of the crop, on the whole, is reported to be fair.

A statement showing the present reported estimates of area and yield according to the recognized trade descriptions of cotton, as compared with those of the preceding year, is given below:—

Description of Cotton	Acres (thousands)		Bales of 400 lbs each (thousands)		Yield per acre lbs	
	1932–33	1931–32	1932–33	1931–32	1932–33	1931–32
Oomras—						
Khandesh	1,061	1,221	212	179	80	59
Central India .	1,617	1,804	215	205	53	45
Barsi and Nagar .	2,439	2,595	362	360	59	55
Hyderabad-Gaorani	890	862	131	115	59	53
Berar	2,944	3,162	527	357	72	45
Central Provinces	1,272	1,458	213	139	67	38
Total .	10,223	11,102	1,660	1,355	65	49
Dholleras	2,586	2,101	642	582	99	111
Bengal-Sind—						
United Provinces ..	527	753	170	207	129	110
Rajputana	452	463	68	73	60	63
Sind-Punjab . ..	1,736	1,992	499	457	115	92
Others	72	74	15	16	83	86
Total .. .	2,787	3,282	752	753	108	92
American—						
Punjab	774	763	200	215	103	113
Sind	88	61	24	14	109	92
Total	862	824	224	229	104	111
Broach	1,276	1,250	296	294	93	94
Coompta-Dharwars .	1,401	1,540	213	253	61	66
Westerns and Northerns..	1,591	1,862	202	228	51	49
Cocanadas . ..	189	194	32	35	68	72
Tinnevellies	453	502	125	138	110	110
Salems	193	193	35	35	73	73
Cambodias.. .. .	320	273	141	119	176	174
Comillas, Burmas and other sorts .. .	469	359	103	67	88	75
Grand Total ..	22,350	23,482	4,425	4,088	79	70

Activities of The Indian Central Cotton Committee.

Among the subjects discussed at the meeting of the Indian Central Cotton Committee, held recently in Karachi, were the Central Provinces Cotton Market Act, the Madras Cotton Control Act, the economic investigation into the cost of production of crops in the principal cotton and sugar cane tracts of India, and also to the effect of the Ottawa agreement on the greater use of Indian cotton by Lancashire mills An important decision arrived at was that common standards should be adopted for Indian cotton in the Indian markets, before introducing universal standards

The Committee next considered a draft memorandum on the compilation and publication of cotton forecasts submitted by a local sub-committee It was decided to take steps for the determination of village or extra factory consumption and the carry-over of cotton from season to season

Pooling arrangements made by ginning and pressing factories were considered to have an adverse effect on the producer s return, and should be controlled, and it was regretted that provincial governments had decided not to take any action against the pools The proposal for the formation of a cotton association at Karachi received consideration, and the Committee noted with satisfaction the important advances made at Karachi in the organization of the cotton market

It was decided to send the report of the Gujerat Boll-worm Research Scheme to the Imperial Council of Agricultural Research for publication The Punjab Entomological (Pink Boll-worm) Research Scheme was extended for a period of one year

For the Hyderabad (Deccan) extension of the Seed Distribution Scheme for a period of three years from March 1, 1933, in view of the great efforts being made by Mr B A Collins to establish an area of superior cotton in the Raichur Protected Zone, a total grant of Rs 17,400 was sanctioned

New schemes which were sanctioned are the Hyderabad Entomological (Pink and Spotted Boll-worm) Scheme, the organization of Zemindara Co-operative Sale Societies, the Bundelkhand (United Provinces) Cotton Survey Scheme, the Bengal Comilla Cotton Scheme for the improvement of Comilla cotton, the Madras Nadam Cotton Breeding Scheme for carrying out selection work on Nadam cotton grown in the Coimbatore and Salem districts with a view to evolving a high yielding annual type, and the Navsari Seed Storage Scheme for starting depots of 1027 A L F in certain districts

Arising out of Article 8 of the agreement made at the Imperial Conference held at Ottawa in 1932 with regard to the greater use of Indian cotton in the United Kingdom, a rather lengthy discussion centred round the question of taking effective steps to ensure the use of Indian cotton in the United Kingdom It was urged that immediate results could be achieved if the United Kingdom gave preference to Indian cotton on the same basis as Lancashire goods received preference in India. On the other hand, it was maintained that immediate steps could be taken by full exploration of the possibilities of Article 8 of the Ottawa Agreement, and the Committee resolved to collaborate in the meantime with the Committee established in Lancashire for this purpose.

Mills and exporters in India have been good enough to supply information regarding their demands for various types of Indian cotton. The information so received, though incomplete, still gives a better idea than hitherto of the types which are most in demand by the mills in India, and which have an exportable surplus, and are exported.

A point of importance in this connection is that the difference in price between short-staple and medium- or long-staple cottons has, for some reasons, been narrower in recent years than it used to be.

COTTON SPINNING TESTS ON INDIAN COTTON.

After completing spinning tests on various samples of Punjab-American 4F. cotton, the Technological Laboratory of the Indian Central Cotton Committee arrived at the following conclusions:—

GRADER'S REPORT.

	1931–32	1932–33
Contract valued under	Broach	Broach
Class	Fully Good	Fully Good
Colour	White	White
Staple length	$\frac{7}{8}$ in.	$\frac{7}{8}$ in.
Staple strength	Fair	Fair
Regularity	Fair	Fair
Value above or below contract rate	Rs. 40 on	Rs. 10 on
Basis	Rs. 210	Rs. 185
Date of valuation	1–2–32	14–3–33

SPINNING TESTS.

1. *Treatment*: Lattice feeder, Crighton (twice), hopper, scutcher (three times), card, drawing (two heads), slubber, inter, rover, spun from single-hank roving in ring frame No. 1.

2. *Spinning Master's Report*:—

Season	1931–32	1932–33
Colour	White	White
Cleanliness	Shows occasional stain; fairly leafy (very fine leaf)	Somewhat leafy
Feel	Softish	Fairly good
Ginning and neppiness ..	Well-ginned	Well-ginned except for some knottiness
Card-silver	Clean	Almost clean
Card-web	Even and nep-free	Good
Weight of 10 flat strips ..	16·1 grams	15·1 grams

REMARKS.

Fibre. As regards the Khanewal samples, the fibre-length is fairly constant in all seasons except 1928-29 and 1930-31, when it is rather low. The fibre-weight per unit length and the fibre-rigidity show much seasonal variation, both being very low in 1926-27 and high in 1928-29. The fibre-strength shows a progressive increase since it was first measured in 1926-27. The Lyallpur sample of 1931-32 is distinctly short, but that of 1932-33 is nearly as long as, and finer than, the Khanewal samples, besides possessing high fibre-strength per unit fibre-weight per inch.

Waste. Waste losses in the blow-room and the card-room are rather high in the three seasons 1928-30 and in 1932-33.

Breakages. Yarn breakages in the ring frame are fairly numerous in the 20's B counts in 1928-31 and numerous in the same count in the following seasons. They are very numerous indeed in 24's B counts in 1932-33.

Yarn. This cotton generally gives even to fairly even 20's, but the 1928-29 yarns are less, while those of 1930-32 are even more than usual. Its yarns are usually nep-free or slightly neppy, but those of the two seasons 1928-30 are rather neppy. These two seasons were, in fact, bad for this cotton, when its yarns, besides being unusually uneven and neppy, were very weak In 1931-32 its yarns are just as weak as in 1929-30, but they are superior in respect of evenness and neppiness.

Conclusions. Up to 1927-28, the yarn strength results do not show much seasonal variation, but 1928-29 witnessed a big drop, from which the cotton recovered gradually in the following two seasons. The Lyallpur of 1932-33 is much superior to that of 1931-32 and has given stronger yarns than even any of the Khanewal samples. The following are the highest standard warp counts for which the cotton is suitable in the different seasons·—

1924–25	22's	1927–28	22's	1930–31	22's
1925–26	22's	1928–29	16's	1931–32	20's
1926–27	24's	1929–30	20's	1932–33	25's

Similar tests have also been performed by the Technological Laboratory upon various samples of Broach cotton, with the following results:—

I. SPINNING TESTS.

Treatment.—These samples were passed through the porcupine, Crighton (twice), hopper, scutcher (3 times), card, drawing (2 heads), slubber, inter, rover and spun from single hank roving in ring frame No. 1.

II. GRADER'S REPORT* ON BROACH COTTON, 1932–33

	Broach		
	1930–31	1931–32	1932–33
Contract valued under	Broach	Broach	Hedge contract Broach F G No 2, April/May, 1933
Class	Superfine	Superfine	Superfine
Colour	White	White with touch of cream	White
Staple Length	$\frac{11}{16}''$ — $\frac{7}{8}''$	$\frac{29}{32}''$	$\frac{3}{4}''$
Staple Strength	Fair	Fair	Moderate
Regularity	Fair	Fair	Somewhat irregular
Value above or below contract rate	Rs. 10 on	Rs. 20 on	Rs. 7 on
Basis	Rs. 208	Rs. 170	F. G. Broach April/May
Date of Valuation	14–3–31	5–5–32	17–3–33
Remarks	..	—	This sample is deficient in staple and strength as compared with last year's crop

* Report for 1932–33 is made by the mill supplying the sample.

SPINNING TEST RESULTS FOR PUNJAB-AMERICAN 4F.

HANK (1932–33)	
Card	0·16
Slubber	0·73
Inter	1·63
Rover	4·02

TRAVELLER COUNTS	
20's	3/0
24's	4/0

SPINDLE SPEED (1932–33)	
20's B	9,600 r.p.m.
24's A	9,300 r p.m.
24's B	10,400 r.p.m.

1	2	3	4	5	6	7	8	9	10	11	12	13	14 15	16	17	18	19	20	21	22	23	24	25	26
			Waste Percentages				Ring Frame Particulars*				Yarn Test Results													
											Lea		Ballistic			Single Thread								
Sample No.	Season	Counts Nominal	Blow Room Loss	Card Room Loss	Spinning Loss	Total Loss	Yarn Breakages per 100 spindles per hour	Front Roller Speed R.P.M.	Draft	Turns per inch	Counts Actual	Strength (lbs.)	Counts Actual	Work of rupture (inch-lbs.)	Work Irregularity (%)	Counts	Strength (ozs.)	Strength Irregularity (%)	Weakness Percentage	Extension (%)	Extension Irregularity (%)	Evenness Class	Neps per yard	Turns per inch Actual
1243	1931–32	20B	7·7	9·9	0·6	17·4	70	193	5·16	17·98	20·0	67·6	19·8	141·6	4·2	20·5	10·2	11·9	6·7	8·9	7·8	3	0·8	17·2
1679/1	1932–33	”	8·6	9·6	0·6	17·8	73	195	5·21	17·98	19·7	81·7	19·5	157·4	5·4	19·8	12 2	15·6	7·0	8·9	9·3	4	1·2	17·5
1679/2	”	”	8·6	9·2	0·8	17·7	78	195	5·12	17·98	19·4	80·0	19·0	154·6	4·1	19·4	11·5	11·4	4·5	8·6	8·1	4	1·0	17·4
1243	1931–32	24A	—	—	—	—	53	174	6·18	19·73	23·6	52·2	23·9	106·0	3·3	24·4	8·2	14·1	6·0	8·4	10·0	4	1·4	18·9
1679/1	1932–33	”	—	—	—	—	82	173	6·11	19·73	23·3	66·0	22·8	120·0	4·0	24·0	9·3	15·2	5·0	8·2	10·0	5	1·0	19·2
1679/2	”	”	—	—	—	—	82	173	6·11	19·73	23·2	60·1	22·8	109·4	2·7	23·9	8·6	14·1	10·0	7·8	11·3	4	1·2	19·0
1243	1931–32	24B	—	—	—	—	80	180	6·13	20·74	23·5	56·2	23·8	106·4	3·3	24·4	8·6	13·1	5·8	8·2	9·6	4	1·3	19·9
1679/1	1932–33	”	—	—	—	—	77	182	6·29	20·74	23·2	66·2	23·0	119·2	3·3	24·0	9·7	11·1	4·5	8·2	11·9	5	1·0	20·1
1679/2	”	”	—	—	—	—	122	182	6·29	20·74	23·3	60·8	23·0	110·2	2·5	24·1	8·7	13·5	4 0	7·8	11·5	5	1·2	20·2

* Diameter of ring frame front roller—⅞ in. Diameter of rings—1⅞ in.

SPINNING TEST RESULTS FOR BROACH COTTON, 1932-33

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
					Waste Percentages				Ring Frame Particulars*					Yarn Test Results								
														Lea			Ballistic					
Sample No	Season	Date of Spinning	Counts Nominal	Weight of Sample lbs	Blow Room Loss	Card Room Loss	Spinning Loss	Total Loss	Yarn Breakages per 100 spindles per hour	Front Roller Speed R P M	Spindle Speed R P M	Draft	Turns per inch	Counts Actual	Strength (lb)	Count Strength Product	Counts Actual	Work of Rupture (inch lb)	Count Work Product	Evenness Class	Neps per yard	Turns per inch Actual
1814	1931-32	29-4-32	12	10	5 3	6 9	0 [illegible]	14 2	[illegible]	[illegible]08	8 000	4 50	1[illegible] [illegible]	12 0	[illegible]	1 144	12 2	207 [illegible]	2 [illegible]	4	1 [illegible]	13 4
1707	1932-33	22-3-33	12	10	8 1	9 0	0 [illegible]	17 4	6	[illegible]04	7 600	[illegible] 25	13 [illegible]	12 4	80 [illegible]	[illegible]96	17 4	193 2	2 396	4	0 5	13 4
1007	1930-31	17-3-31	16A	10	7 0	8 7	0 6	15 5	[illegible]	184	8 000	[illegible]	15 9	16 6	[illegible] 0	979	16 [illegible]	121 2	2 01[illegible]	3	1 2	15 5
1814	1931-32	28-4-32	16A	—	—	—	—	—	85	181	8 100	5 00	15 9	16 1	57 [illegible]	[illegible]	16 [illegible]	130 6	2 116	[illegible]	1 8	15 5
1707	1932-33	22-3-33	16A	—	—	—	—	—	121	17[illegible]	[illegible]00	5 54	1[illegible] [illegible]	16 [illegible]	52 1	849	16 0	146 4	2 342	[illegible]	0	15 6
1814	1931-32	29-4-32	16B	—	—	—	—	—	62	190	9 000	[illegible] 00	16 97	16 0	69 8	1 117	15 9	154 4	2 369	4	1 5	16 4
1707	1932-33	22-3-33	16B	—	—	—	—	—	133	186	8 700	[illegible] 53	16 [illegible]	16 1	65 9	1 061	16 1	148 0	[illegible]	5	0 5	16 4
1007	1930-31	17-3-31	20	—	—	—	—	—	50	180	10 000	6 2[illegible]	20 2[illegible]	20 1	58 1	1 168	20	104 4	2 140	4	1 7	19 6

* Diameter of ring frame front roller—[illegible]″ Diameter of rings—1[illegible]

INDIA.

DETAILED STATEMENT OF THE QUANTITY (IN POUNDS AND THEIR EQUIVALENT IN YARDS) AND DESCRIPTION OF WOVEN GOODS MANUFACTURED.

GRAND TOTAL, INDIA (BRITISH INDIA AND INDIAN STATES).

Description		Six months, April to September		
		1930	1931	1932
Grey and bleached piece-goods :				
Chadars	lbs.	10,688,361	10,387,810	11,496,944
	yds	28,130,661	28,297,732	31,228,597
Dhutis	lbs.	82,837,911	98,205,921	101,837,557
	yds.	419,500,870	510,767,156	529,230,504
Drills and jeans ..	lbs	8,546,976	11,340,169	13,263,319
	yds.	32,581,396	44,090,349	53,140,553
Cambrics and lawns ..	lbs.	1,486,396	2,692,874	4,673,031
	yds.	9,671,757	19,868,180	35,424,296
Printers	lbs.	1,829,693	2,035,725	1,166,353
	yds	9,040,335	9,868,368	6,529,792
Shirtings and longcloth	lbs.	66,367,561	86,335,058	85,198,180
	yds.	305,497,371	387,304,298	391,606,151
T-cloths, domestics and sheetings	lbs.	14,289,967	19,058,903	19,979,187
	yds.	52,172,836	69,873,230	73,208,695
Tent-cloth	lbs.	1,925,398	896,217	1,342,097
	yds.	4,968,402	2,201,818	3,166,470
Khadi, Dungri or Khaddar	lbs.	32,219,105	19,071,405	18,571,472
	yds.	94,643,820	55,590,558	54,264,148
Other sorts	lbs.	4,522,187	5,700,159	6,387,924
	yds.	19,482,303	26,208,449	29,219,677
Total	lbs	224,713,555	255,724,241	263,916,064
	yds.	975,689,751	1,154,070,138	1,207,018,883
Coloured piece-goods ..	lbs.	54,031,862	64,666,543	73,542,444
	yds.	257,024,846	316,783,824	369,631,658
Grey and coloured goods, other than piece-goods	lbs.	1,787,686	1,649,926	1,591,206
	doz.	443,889	420,016	402,308
Hosiery	lbs.	794,819	884,186	1,433,137
	doz.	246,115	322,921	422,019
Miscellaneous	lbs.	2,123,409	2,487,065	2,148,610
Cotton goods mixed with silk or wool	lbs.	1,838,209	1,973,144	1,013,613
GRAND TOTAL..	lbs.	285,280,540	327,385,105	343,645,074
	yds.	1,232,714,597	1,470,853,962	1,576,650,541
	doz.	690,004	742,937	824,327

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DETAILED STATEMENT OF THE QUANTITY (IN POUNDS) AND THE COUNTS OF YARN SPUN.

GRAND TOTAL, INDIA (BRITISH INDIA AND INDIAN STATES).

Count or Number	Six months, April to September		
	1930	1931	1932
1	964,782	1,933,123	1,571,767
2	4,396,056	5,353,001	6,014,587
3	963,207	1,027,412	962,019
4	4,416,620	4,831,015	3,789,515
5	1,305,826	1,528,835	1,341,946
6	4,622,366	4,178,428	4,233,445
7	11,437,227	12,589,808	11,259,976
8	5,403,556	4,460,093	4,840,779
9	8,224,571	8,123,972	7,790,099
10	11,689,878	11,048,634	14,756,778
Total, Nos. 1 to 10	53,424,089	55,074,321	56,560,911
11	22,232,011	22,364,154	22,637,001
12	17,398,005	13,173,255	15,322,207
13	15,648,202	15,563,217	16,468,211
14	16,230,088	17,441,044	20,515,671
15	13,459,819	15,263,293	13,338,000
16	17,185,722	17,344,254	17,754,809
17	8,773,747	9,528,402	13,275,305
18	12,838,111	14,895,088	16,890,469
19	6,579,529	6,723,466	6,819,683
20	69,202,901	78,273,787	93,149,370
Total, Nos. 11 to 20	199,548,135	210,569,960	236,170,726
21	27,462,084	32,320,395	29,883,658
22	26,028,742	26,882,406	29,710,736
23	4,101,657	4,310,281	4,952,478
24	23,867,436	26,312,136	26,962,922
25	2,666,671	2,803,567	2,923,663
26	8,200,125	7,582,897	9,084,074
27	2,641,147	2,179,628	2,688,475
28	7,648,402	8,939,891	9,878,630
29	1,848,234	1,718,061	1,850,332
30	26,404,112	33,035,034	36,637,979
Total, Nos 21 to 30	130,868,610	146,084,296	154,572,947
31	694,836	1,123,133	1,434,941
32	7,797,589	8,913,044	9,965,394
33	391,764	228,557	286,805
34	1,646,230	1,603,431	1,793,640
35	618,798	736,616	871,954
36	1,851,088	3,158,334	2,818,632
37	209,113	53,472	170,413
38	790,291	671,384	622,345
39	42,548	231,680	174,254
40	15,016,373	19,791,849	21,228,156
Total, Nos. 31 to 40	29,058,630	36,511,500	39,366,534
Above 40	12,305,117	17,721,398	17,709,645
Wastes, etc.	3,234,153	2,714,660	2,946,496
GRAND TOTAL	428,438,734	468,676,135	507,327,259

Indian Imports and Exports of Cotton Twist and Yarn and Cotton Piece Goods for the Year ending December 31st, 1932.

A. COTTON TWIST AND YARN

Exports (In thousands of lbs.)

	Jan./Dec., 1932
Persia, Aden and Iraq	8,087
China	4
Egypt	611
Other countries	7,885
Total, 1932	16,587
„ 1931	22,095
„ 1930	23,063

Imports (In thousands of lbs.)

	Jan./Dec., 1932
Grey	
United Kingdom	8,876
Japan	9,429
Other countries	12,365
Total, 1932	30,670
„ 1931	20,763
„ 1930	22,122

	Jan./Dec., 1932
White	
United Kingdom	3,576
Japan	648
Other countries	14
Total, 1932	4,238
„ 1931	3,614
„ 1930	4,132

	Jan./Dec., 1932
Coloured	
United Kingdom	1,629
Japan	—
Other countries	78
Total, 1932	1,707
„ 1931	1,470
„ 1930	2,341

B. COTTON PIECE GOODS

Exports (In lakhs of yards)

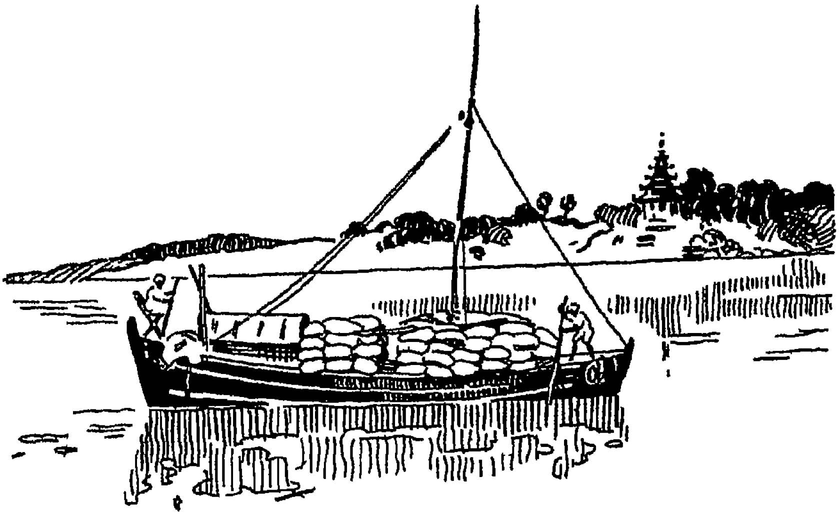
	Jan./Dec., 1932
Persia, Arabia, Aden and Iraq	291
Ceylon	150
Straits Settlements, Siam and China	97
East Africa (including Mauritius)	184
Other countries	94
Total, 1932	816
„ 1931	991
„ 1930	1,034

IMPORTS (In lakhs of yards)

GREY	Jan./Dec., 1932
United Kingdom	892
Japan	2,429
America	3
Other countries	36
Total, 1932	3,360
„ 1931	2,496
„ 1930	5,601

WHITE	Jan./Dec., 1932
United Kingdom	2,685
Other countries	1,226
Total, 1932	3,911
„ 1931	2,629
„ 1930	3,497

COLOURED, PRINTED OR DYED	Jan./Dec., 1932
United Kingdom	1,837
Continent	144
Japan	1,993
Other countries	24
Total, 1932	3,998
„ 1931	2,076
„ 1930	3,288



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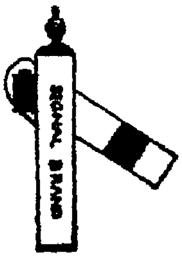

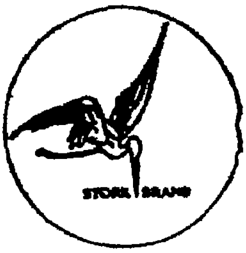

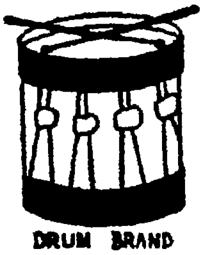

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Ring and Traveller Designs and Speeds.

By DONALD EADIE (Eadie Bros. & Co. Ltd.)

(Continued from the previous issue.)

TRAVELLER SPEEDS.

We now come to the last part of this talk—the part on speeds.

As, in most of the examples which I shall give you, the front roller speed is not known, the calculations all ignore this factor, which after all only accounts for a slight reduction in most cases For instance, at 11,000 spindle revs. with 1⅝-in. rings, ⅞-in. front rollers, and 242 revolutions, the difference between allowing for traveller lag and not allowing for it is less than one foot per second.

Before we take isolated examples of speed, here are one or two remarks of a general nature. In order to protect our patents we had to find firms abroad to make and sell our wick-lubricating doubling ring. When we approached the best makers in Germany and America, giving them chapter and verse of what the ring had done here, they both replied at once to the effect that while the idea seemed good, the "before" part of our "before and after" propaganda was all wrong. Their doublers were already running at much higher speeds than ours. Our German licensee estimated the difference in doubling speeds in the two countries at from 10 per cent. to 15 per cent. This was early in 1931. We ourselves had known of the very high spindle speeds in Switzerland for some years, but I don't think we were generally believed when we spoke of 12,000 and 13,000 revs. We had also been given to understand that the Americans were cabling on 3½-in. rings at 6,000 revs. If there was anything in England to match these speeds at that time (1929) we did not know of it. To-day my own impression is that the best speeds here probably compare favourably with average of other countries. On the other hand, I don't think that some of *their* best speeds can be matched here at all.

I have previously mentioned that three competent authorities had roughly fixed the maximum speed for spinning travellers running on unlubricated rings at about 70 to 75 ft. per second.

This speed represents about 10,700 revs. with 1⅝-in. rings. Let us see what we can produce round about this mark with spinning rings and travellers. I recently asked several friends in the machinery business to give me a rough idea of what new frames have been expected to do at various times during the last twenty years. The gist of one reply dealing only with India is as follows: From 1912 to 1921 no great change, with the average slightly below 9,000 revs. with 1⅝-in. rings. The average in the period 1929-1932, however, is just over 10,000, with a few examples only slightly below 11,000. The rise here then is from about 66 ft. per second to 73 ft., and we are approaching the so-called limit.

Another example from the same market shows a maximum of 12,500 revs. and a minimum of 9,000 with variable-speed motors. This is not strictly comparable since the highest speed is not sustained speed, but the travellers apparently stand up quite well. Presumably the time spent running at 9,000 revs. is sufficient to cool off the traveller after its spurt up to 12,500. An average of 10,700 is slightly above the limit, and giving a mean traveller speed of 76 ft. per second would be just on the so-called limit.

A good deal of the increase in speeds has been made possible owing to the much better mixings of cotton now used. I understand Surat and American are much more used. We used to reckon that, count for count, it was necessary to use a traveller five sizes lighter in India than in Lancashire.

The figures given me by another friend agree substantially with these, but he adds that Japan has jumped up in the same twenty years to 11,000 revs. and over. He mentions a speed of 14,000 in some cases, but I have no information to confirm this at all. In Switzerland, the other day, we came across a mill where they claim to be running at 10,000 r.p.m. on 1⅞-in. rings, and this speed is substantially above the so-called limit at 82 ft. I do not know what the class of work was.

From the November issue of the American journal *Cotton* I have obtained the only unlubricated traveller speeds higher than these, but they are with much larger rings—they are the ones mentioned earlier in the talk and refer to big package installations in America. They upset the theory of a 70- to 75-ft. maximum. At 88 ft. per second is recorded 7's counts being spun on 3-in. rings at 6,900 revs. and, in the same mill, 13's counts on 2½-in. rings at 8,300 revs.
This is an installation of 25,000 spindles. Previously they used 2⅛-in. rings, and had a total labour cost of 1.70 cents per lb. in the spinning and spooler rooms. This total cost was reduced to .875 cents per lb. by the above installation. The figures are stated to be "comparative and pre-depression."

At 94 feet are recorded 10's to 16's being spun on 2½-in. rings at 8,774 revs. At 103 ft. we have word of 8's counts being spun on 3-in. rings at 7,816 revs. In this case there is the additional information that when spinning finer than 8's the speed has to be reduced. Spinners attend to eight sides each of 114 spindles, and the normal ends down per hour are 30/35 per 1,000 spindles. The installation consists of 2,736 spindles. All these speeds are for unlubricated rings and travellers of spinning shape. Turning to travellers of the doubling shape, here are some examples in the fine range from 80/2 to 105/2 for comparison In England we have examples of 100/2 being done on two different types of patent ring at 71 ft, apparently without trouble Also in England, we have 80/2, 75 turns, being done at 80 ft per second, 10,500 revs on 1¾-in rings with wick lubrication Again we have examples from Switzerland at 82, 84 and 88 ft, the latter being done at 13,000 on 40 mm rings with ordinary grease lubrication

Swiss speeds seem to be very high indeed since as recently as last month, our representative obtained doubling speeds from four mills, all of which were over 82 ft per second, viz, one case of 10,000 and one of 11,000 revs in conjunction with 1⅞ in rings, one case of 10,000 with 2-in rings and one of 6,000 with 3½ in rings I don't know where we should go to find such high figures in this country In all probability they exist somewhere, but I assure you that we do not hear of them These figures certainly seem to confirm what our American and German friends said when we told them of the increases in speed that were possible with wick lubrication

Our information is rather poor in the next range of counts below the fine ones just given, but the only example is none the less startling in the extreme We sold a set of wick lubricated rings of 2⅜-in diameter to a French firm, and they wrote us last month saying that some trouble (unspecified) was being experienced with the travellers at speeds between 10,000 and 11,000 on 78/ metric counts We figured this out, and found that the lower figure gave 103 ft per second and the higher 113—either figure a record so far as we were concerned for rings and travellers of standard depth Below this range most of my information applies to cable yarns for motor tyres, a lot of which is 15-fold 23's Speeds here seem to vary tremendously, and we have records from different mills of 59, 61, 78 and 89 ft per second on rings from 4¼ ins up to 5½ ins

We understand that there is at least one frame running at about 96 ft per second—4,000 revs with 5½ in rings, but this is rather exceptional, and seems to be high water mark for the moment On the whole, these compare favourably with what we hear from abroad

Worsted 62/"'s yarn is being doubled successfully in one country on a self-lubricating *spinning ring* of very ingenious design With the unlubricated spinning ring in the same mill, the speed is low, viz, 6,000 revs with 2-in rings, whereas when lubrication was successfully applied the speed was raised to 6,000 at the start and then 8,800 With the same type of ring too, 20's counts with 21 turns is being spun on 2⅜in rings at 9,700 revs—or 101 ft per second traveller speed

Finally, although we may be a bit behind with the spinning ring, there can be no doubt that for twisting silk and artificial silk we are several jumps ahead In America one firm alone has over 5,000 rings of the laced-wick pattern, bought on the basis of their trials, during which they ran up to 11,400 revs with 2¾-in rings putting about 10 turns in real silk. This gives a traveller speed of 136 ft per second, but this might be substantially reduced if we knew the delivery rate For instance, similar work is being done in this country on rayon by one firm, and the delivery is at the extraordinary rate of 650 ft a minute

The immediate result of this speed in America cannot at the moment be foreseen, since it is within the bounds of possibility that machines may require to be re-designed if the full speed capacity of these rings and travellers is to be utilized. At the moment the frame makers are advertising a speed of 10,000 r.p.m., and the silk mills are well satisfied—so they should be seeing that 4,500 r.p.m. was top limit with the old combination ring and traveller.

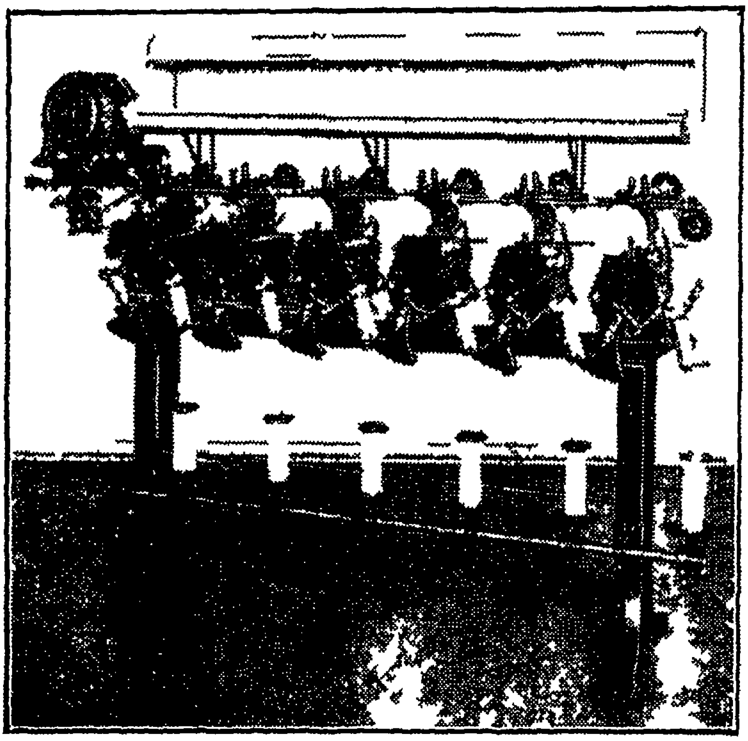
The situation is rather like that of the motor manufacturer who "hots" his engine to such an extent that he has to re-design the whole of the chassis in order to withstand the increased strains and stresses. When you come to think of it, there is a good deal of similarity between cars and rings and travellers. Both want careful running in. Only the best of both are capable of sustained high speeds. Finally, it is the high-speed merchant in both fields who enables us to progress and improve the breed. Differences in quality which pass quite undetected at touring speeds are instantly revealed by the punishing work of Brooklands track or by the highest spindle speeds.

IMPROVED WARP STOP-MOTION.

The usual type of warp stop-motion is almost standard in general principle of working. It consists of a rocking comb or of castellated, fixed and reciprocating sliding bars, the movement being prevented when an end breaks and a dropper falls. The to-and-fro motion is derived from an eccentric on the bottom shaft of the loom, and the connections include a give-way arrangement operated when comb or bar cannot move. The breaking of this drive link moves a lever or wire connection which brings a finger on the starting lever into the path of the slay, and thus the starting lever is knocked out of its holding slot and the loom stops. The sliding bar or castle type of warp stop-motion is superseding the nipper type, as it is found that usually it is more economical and easier for the weaver.

A new "Catteau" warp stop-motion has the usual reliable and efficient arrangements described without details above, but makes two special claims. The fixed and sliding bars are carried above the warp, thus avoiding trouble that might arise from size, fluff, or dirt falling from the warp on to them. The sliding bar has V-shaped slots with rounded corners; whilst the fixed bar slots are of similar inclination, being wider at the bottom than at the top. Consequently, the dropper from a broken end is forced into an inclined position and opens the warp by pushing ends to one side sufficient to show clearly the position of the broken end. The motion comprises two, four, six, or eight pairs of such "dented" bars and the same number of rows of droppers, depending, of course, on the density of warp ends per inch. The droppers can be opened or closed, and the motion acts on every pick.

The to-and-fro motion is given by an eccentric on the bottom shaft to a small shaft at the driving and bracket and connected to



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the sliding bars by an arm and cranked lever. When the sliding bar is locked by a dropper, a cam piece which is used pushed against the end of a lever and by a connection operates the finger which is fixed on the spring starting handle of the loom.

The motion is claimed to be simple, reliable and easy to fit on all looms, and a very large number have been applied to looms.

A NEW TYPE AUTOMATIC LOOM.

An new type of weft-replenishing motion has been invented by Mr. J. E. Moore, managing director of the Chain Bar Mill Co. Ltd., Manchester. A novel feature is that the bobbin is changed when the shuttle is out of action, and it is placed in changing position by arrangements somewhat similar in principle to those of a circular box loom. The boxes are turned under the control of a weft feeler. New cops are contained in a battery which revolves in conjunction with the circular box and this requires replenishing only after running two hours or more. Instead of an almost instantaneous change of cop the time of two picks is allowed for the operation and it is claimed that any type of weft can be satisfactorily woven.

NEW BACK STRIPPING MOTION.

Interesting results are shown in a published account of recent tests with a new patent back stripping motion to be applied to standard cards. This new motion is yet another time and money-saving device designed to assist the cotton spinner in his struggle with low prices and high overhead expenses.

Cards are running all over the world making from 1.2 per cent. to 4 per cent. flat strip under normal working conditions. In spite of the fact that a very fair price may be generally obtained from the waste dealer for this strip, the cost of making waste must be calculated on the value of the cotton delivered from the card in actual sliver. Thus, if "x" lbs. of cotton are made in flat strip and the sliver delivered is worth "y" pence per lb., then the primary cost of making waste will be "xy" pence. This is to a certain degree offset by the price obtainable for the strip from the dealer.

In the percentages given below of a test run under actual mill conditions it will be seen that the flat strips were set to give 1.59 per cent.—a very light strip indeed. But in spite of this there was an increased production of .87 per cent. in sliver without deterioration to the web.

The new attachment which has been introduced by Platt Bros. & Co. Ltd., of Oldham, is shown in the accompanying illustration and is described in the firm's *Bulletin*.

The flats are revolved in a reverse direction to the normal and are stripped through the medium of a wire brush mounted on brackets fixed to the taker-in pedestals. The strips are taken from the brush by a comb and guided down on to the unrolling lap with the help of a metal guide sheet. It is emphasized that this wire brush will in no way deteriorate the condition of the flat wire, as its surface speed is only very slightly in excess of the flats. As might be expected, there is an increase of .6 per cent. in the taker-in droppings, but there is no good fibre lost, and this increase is composed of heavy impurities.

More important details of the test—standard card with front stripper versus the new back stripping attachment—are given below: —

	With Back Stripper	With Ordinary Front Stripper
Percentage weight of Sliver produced . .	95·9 %	95·03 %
Percentage of Cylinder Strip .. .	·56 %	·52 %
Percentage of Flat Strip	—	1·59 %
Percentage of Taker-in Droppings	1·91 %	1·36 %

Lap cotton prepared for carding on a converted two-way single process system is worth :—

	·133d. lb
Raw Cotton	6·75d. lb
	6·883d. lb
Cost of Carding	·424d. lb
Total Cost of Sliver	7·307d. lb

COSTS OF COTTON

Raw cotton at 6¾d./lb. Flat strip at 2⅜d./lb. Cylinder strip at 1⅞d./lb

BACK STRIPPER VERSUS FRONT STRIPPER

Cost of working Cotton into Carded Sliver, 7·307d. lb

Back Stripper	Pence	Standard Front Stripper	Pence
Value of Production as Carded Sliver			
7·307d. × 37 lbs 5 ozs 37 grs.	272·70	7·307d. × 36 lbs. 15 ozs. 75 grs.	269·99
Cost of making Waste			
Taker-in Fly, 11 ozs. 50 grs.	5·07	Taker-in Fly, 8 ozs. 200 grs.	3·87
Cylinder Undercasing Fly.—No Bearing on Test.			
. Doffer Strip.—Identical in either case, so no Bearing on Test.			
Cylinder Strip, 3 ozs. 212 grs	1·18	Cylinder Strip, 3 ozs. 162 grs.	1·15
Flat Strip	—	Flat Strip, 9 ozs. 175 grs...	2·9
Total cost	6·25d.	Total cost	7·92d.

Waste.—Representing reduction in cost of making waste by using back stripper of 7.92d.—6.25d. = 1.67d./Card/3¼ hours.

Sliver.—Representing gain in value from increased production at 272.7d.—269.99d. . . . = 2.71d./Card/3¼ hours.

Total gain by using back stripper = 4·68d./Card/3½ hours or 1·34d./Card/hour.

Assuming the working year as composed of 50 weeks of 47 hours each, this saving of 1·34d./card/hour represents a yearly saving of £13·4s.

NEW COTTON PICKER IN THE U S S R

A new six-row cotton picker has been constructed in the Petrovsky plant in Kherson according to the model worked out by a group of scientists and engineers of the Ukrainian Scientific Research Institute for Mechanization of Agriculture.

This picker has a much higher production capacity than the American two-row cotton picker and makes a full use of the tractor power possible. It gives an additional operation, that of sorting cotton according to grades.

This picker and a special cleaning machine for the elimination of leaves complete the series of Soviet cotton machines for the mechanization of cotton cultivation and cotton industry.

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THE LANCASHIRE TEXTILE INDUSTRY

The 1933 edition of this publication is now ready It includes details of approximately 2500 firms in 41 Lancashire Towns and their adjoining districts fully indexed and classified 95 different kinds of Cotton Fabrics indicating the firms engaged in their manufacture approximately 2700 mill officials and shows where the spindles and looms are operating It gives correct titles numbers of spindles and looms counts spun class of goods manufactured of the Cotton Spinners and Manufacturers Woollen Manufacturers Bleachers Dyers Calico Printers etc in the County Pay Days Telegraphic Addresses and Telephone Numbers are also included In brief an accurate up to date and thoroughly comprehensive Directory and Market Guide of the Cotton Trade Obtainable from any bookseller or direct from the publishers post free

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Industrial Conditions in Japan.

The International Labour Office has recently issued an important report entitled "Industrial Labour in Japan" (London, P. S. King & Son, 10s.), which is the first of a series of studies of industrial conditions in the East. This report has been compiled in co-operation with the Japanese Government, and contains information otherwise inaccessible.

RECRUITMENT OF LABOUR.

An important section deals with the recruitment of labour from the usual districts for the mills. The number of recruiting agents has decreased from its former figure of 50,000. but even now there are some 14,000 agents, who in 1929 recruited 336,891 workers and in 1930 268,372. In the latter year 215,810 were recruited for the silk reeling, 27,750 for the cotton spinning, and 8,172 for the weaving industries. The agents go around with attractively illustrated propaganda literature. Often they show cinema pictures of factory life, describe its advantages in glowing terms, and quote wages which naturally strike the country people as high in comparison with what they can earn in agriculture. "They promise that part of the earnings of the recruited boy or girl shall be periodically remitted to the parents, and as a rule make the proposal that a lump sum of money shall be sent to parents who may be in need of cash. When a large amount of money has been borrowed by the parents, the son or daughter whose employment is the guarantee for the loan ir virtually deprived of freedom, and is practically in the position of an indentured labourer. While there is no legal obligation for the workers to remain with the employer until the money borrowed has been paid back by so many months, or years, of work, there is, in fact, no other solution than to continue in the employment until the loan is paid back."

It is said that the authorities are trying to discourage the system of loans, and employers are beginning to find that there are disadvantages in the system, and the competition between them to secure labour by these means is diminishing. An inquiry into the conditions of young girls in silk filatures in 1924 showed that in 80 per cent. of the cases loans had been made. Only 18 per cent. of these workers had borrowed the money for their own needs; all the rest had been borrowed by their families. The amount of loans per head ranged from 1 yen to 480 yen, the average being 31⅓ yen, equivalent to nearly 2½ months' wages. (The yen at par was 2s. 0½d.) In 1928 the average indebtedness of girls in another prefecture was 23½ yen. The report makes two quotations on the effects of the system:

> Most of the parents who have asked for one loan demand others, so that the girls have no opportunity of earning wages for their own use. In order to meet this difficulty they are willing to do overtime work at rates far lower than those for regular work.
>
> There are many young girls who work without knowing how their loans are liquidated, or even without the knowledge of exactly how much they are being paid.

WORKING HOURS.

The statistics of hours of work are conflicting. The labour census of 1927 showed prevailing hours of work in silk filatures to be just under 11 a day, and in cotton spinning and weaving just under 10 hours. The Bureau of Statistics gives 9 hours 32 minutes as the average day in textiles in 1930, which reflects the effect of the abolition of night work in cotton spinning in 1929, which reduced hours in this branch from 10 to 8½. According to the 1927 census of labour 8 per cent. of the cotton workers worked overtime, to the average extent of 42 mins. a day in spinning and 48 mins. in weaving. During the last few years the number of permits for overtime working up to two hours a day and for seven days a month, on the grounds of temporary pressure of work, has grown. Most of the permits were for the textile industry, and particularly the weaving mills, which obtained 6,985 out of the 10,152 permits in 1930.

In 1927 most of the cotton spinning and weaving mills had a rest period during the day of between 51 and 60 minutes. The weekly rest day is not customary in Japan. Most firms give two days a month, with several holidays, such as New Year's Day and at midsummer. In 1927 most of the cotton spinners had four days' rest a month, but four-fifths of the weavers had no more than two days. During 1930 more factories, especially spinning mills, granted a weekly rest, owing to the curtailment of production. Although the employment of young persons under sixteen and of women is prohibited from 10 p.m. to 5 a.m., almost all cotton spinners have taken advantage of an exception which allows them to be worked until 11 p.m.

TEXTILE WAGES.

Material on Japanese wages is difficult to judge. There are few collective agreements, for only some 7 per cent. of the workers are organized. In the textile industries, for example, there were in 1930 45 unions with no more than 14,640 members, of whom only 4,819 were women. Only 0.7 per cent. of the female workers in manufacturing industries were in trade unions in 1931. The wages of most workers are fixed by individual bargaining, and "supplementary wages"—overtime pay, special allowances, bonuses, and payment in kind—are an indispensable part of the worker's earnings. In the textile industries 86 per cent. of the workers receive part of their wages in kind; almost all the silk filatures and cotton-spinning factories investigated paid their workers on a system of money wages combined with wages in kind. In 1927 the average daily wages of the 212,519 cotton-spinning workers were 1.13 yen in money, .14 yen in kind, a total of 1.27 yen. Among 15,892 paid wholly in money the average was 1.24 yen. In cotton weaving 27,693 workers paid wholly in money received .96 yen a day; 42,011 paid in money and kind received .94 yen in money and .17 yen in supplies, a total of 1.11 yen. In most factories wages are paid once or twice a month. The wages of women factory workers are extremely low. There is little difference between the wages of the two sexes when they first begin to earn. In September, 1931, the average daily wages of boys under sixteen were .67 yen, as against 2.39 yen earned by workers over that age, while those of girls under sixteen were .51 yen, as against .86 yen for women workers. The number of boys under sixteen employed was only 3.3 per cent. of all male workers. The number of girls under sixteen was 20 per cent. of all female workers.

The average daily wages in the textile industries are given as follows (the earnings including bonuses, allowances, and payments in kind):—

AVERAGE WAGES PER DAY

(In Yen).

	1928	1929	1930	1931
Cotton Spinning —				
Male	1·65	1·61	1·50	1·45
Female	1·12	1·06	0·91	0·79
Cotton Weaving .—				
Male	1·32	1·41	1·28	1·26
Female	0·91	0·93	0·74	0·70
Silk Filatures ·—				
Male	0·97	0·94	0·89	0·79
Female	0·71	0·70	0·57	0·49
Silk Weaving —				
Male	1·50	1·50	1·35	1·28
Female	0·91	0·91	0·74	0·70
Wool Weaving :—				
Male	2·07	1·94	2·00	2·04
Female	1·12	0·99	1·03	1·02

In the past three or four years there has been a steady decline in the wages of factory workers. The decline in 1930 and 1931 is attributed to the increasing severity of the trade depression. The report complains of the lack of data for constructing reliable index-numbers of the cost of living in Japan. The conclusion is drawn that retail prices have declined considerably during the last five years, and there has been an advance in real wages. The average number of working days per month has, however, slightly declined in recent years, and the workers are earning less per month now than a year or two ago. (*Manchester Guardian.*)

TEXTILE WAGES IN JAPAN.

According to recent information from unofficial sources three Japanese textile concerns were arranging to increase wage rates from three to 10 sen per day. The Dai Nihon cotton mills were to increase rates from three to five sen, and in some cases by 10 sen, 2,500 operatives being affected. The Tokyo Cotton Coy. was also raising wages on a similar scale in respect of 1,500 operatives. Finally the Showa Wool mills were to raise the wages of skilled workpeople by five to 10 sen per day and of unskilled workpeople by three to five sen per day, the total number affected being 650.

WAGES IN THE LANCASHIRE COTTON INDUSTRY.

Weekly full-time wage rates in the Lancashire cotton industry are to-day 38 or 39 per cent. higher than in August, 1914, and the equivalent increase in hourly rates of pay is 59 or 60 per cent. on the pre-war figure.

This and other interesting data regarding the comparative rates of wages in the textile industries in 1914 and 1932 is given in the current issue of the *Ministry of Labour Gazette.*

In August, 1914, piece-rates of wages in the cotton industry stood generally at 5 per cent. above the standard list prices. At the end of December, 1932, they were generally 68½ per cent. above the standard in the spinning section and 67 per cent. above the standard in the weaving section. Part of this increase, it is pointed out, however, was granted in 1919, concurrently with a reduction in weekly working hours from 55½ to 48, in order to maintain weekly wages at the same level as before.

If a proportionate allowance is made for this reduction in working hours, weekly full-time wages would appear to be generally about 38 or 39 per cent. above the pre-war level, the equivalent increase in hourly rate of wages being 59 or 60 per cent. If, however, the average hourly output of piece-workers has increased as a result of the reduction in hours, the percentage increase in weekly wages will be correspondingly higher.

In addition, the *Gazette* mentions special increases or allowances have been granted to various classes of operatives, and reductions in wage rates which took effect in November, 1932, were not fully applied to some of the lower-paid workers in the spinning section. The effect of these modifications would be to augment the general percentages quoted.

THE HUNGARIAN TEXTILE INDUSTRY.

In a report upon the Economic Conditions in Hungary (1930-1932) prepared by Dr. H. C. A. Carpenter, and published for the Department of Overseas Trade by H.M. Stationery Office, the writer states that the textile industry, which was formerly prosperous in Hungary, is now feeling the effect of adverse conditions, in spite of the fact that the importation of most textile goods is dependent upon special permits.

The year 1932 was a bad one for industry. The factories were obliged, owing to the decreased purchasing power of the population, to reduce considerably their output without being able to include in their prices the resulting increases of the cost of pro-

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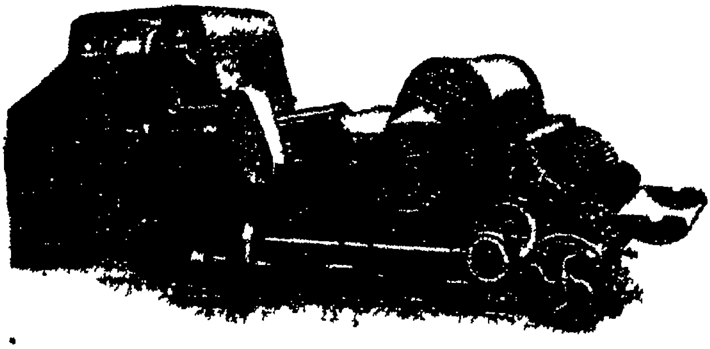

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duction or their growing charges in respect of taxes, freights, etc Apart from the decrease in the purchasing power of the population, a further hindrance to production were the conditions of credit in the industry, which reached a critical point during 1931, when foreign firms refused not only to deliver fresh materials to Hungarian customers, but also attempted to collect their old outstanding debts As a result, a large number of insolvencies occurred which heavily overburdened the factories and forced them to reduce credits

A great handicap for the industry is the difficulty of obtaining raw materials owing to the devisen (exchange) restrictions As an improvement in consumption in Hungary is not to be expected for some time to come, in order to keep the industry better employed, attempts to extend the export trade have been made with a degree of success Nevertheless the difficulties of exporting are increasing, because every State is trying to exclude imports and because the "devisen" policy of the National Bank and their method of conversion impose an export tax on the Hungarian exporter

POLAND

Beginning with January 1, 1933, the most-favoured-nation duty on raw cotton of 1 zloty per 100 kilogrammes (005 cents per lb) is granted only to imports via the Polish ports, whereas imports across the land frontiers must pay 6 zlotys or 030 cents per lb This means virtual exclusion of cotton imports except through Gdynia, and Polish buying from Bremen will be definitely discontinued

Recent press information indicates that the Lodz cotton industry is negotiating with Russian authorities with regard to the delivery of Polish cotton fabrics in exchange for Russian raw cotton to be placed at the disposal of Lodz spinners It appears that these plans have some chance of being brought to a conclusion The Polish cotton industry was accustomed to the use of Russian cotton prior to the war, and Russia would seem to have much to gain by such an arrangement It would make available large quantities of finished fabrics, which they themselves are now handicapped in producing through lack of plant capacity

SHORT-TIME WORKING IN THE POLISH COTTON SPINNING INDUSTRY

It was recently reported from Poland that while part of the 25,000 bales of American cotton stored at Gdynia was destined for other markets (the Baltic countries and Czecho-Slovakia), most of it had been ordered by Polish spinners who were unable to take delivery When this cotton was ordered the mills were working six days a week on one shift, but in the meantime the cartel mills (those spinning American cotton) reduced operations to four days a week

On February 20 last, the Spinners' Cartel reduced working time to 24 hours per week In December, 1932, operating schedules were reduced from 46 to 32 hours per week It was said to be without parallel for the Lodz spinners to work only 24 hours per week other than when stoppage is enforced After the middle of February there was intense price cutting throughout the industry, owing to forced sales by certain millowners who otherwise could not pay wages Cotton takings so far in 1933 have been considerably below last year according to trade reports

THE POLISH TEXTILE STRIKE.

The strike of textile workers in Lodz which has been proceeding for some time has now developed on a large scale The number on strike is given as 90,000 Negotiations between representatives of employers and employees through the intermediary of Government representatives, have ended without result A proposal that a collective agreement should be concluded on the basis of that of 1928 but with a reduction of wages rates of 15 per cent was refused by both employers and employees The former do not feel in the position to conclude such an agreement, whilst the latter demand the full 1928 wages The textile workers' associations in the Bielitz district have also put forward the demand to the employers for the conclusion of a collective agreement, it is possible that the workers here will come out in support of the Lodz compatriots

A later message states that after the strike had lasted for about four weeks, a settlement was reported, the workers having agreed to accept wage cuts of from 12 to 15 per cent on the rates in force under an agreement made in 1928 The effect of this settlement will be, it is understood to leave wage rates unchanged in some cases and to raise them in others, at mills where reductions in wages have taken place since 1928

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THE LATVIAN TEXTILE INDUSTRY.

In Latvia, as elsewhere, the textile industry has suffered from a fall in prices of raw materials and semi-manufactures. This, together with the diminished purchasing power of the population, has meant lower profits for manufacturers As a result, import duties on textiles were increased, whilst in 1931 quotas were introduced.

According to the latest statistics published, the Latvian textile industry employs some 8,000 workpeople, of which 3,000 are in the cotton industry. Imports of cotton goods have diminished from 18,700,000 lats in 1929, to 17,500,000 lats in 1930, and 11,100,000 lats in 1931. Exports consist of yarns only, the figures for the past three years being 561 tons in 1929, 566 tons in 1930, and 533 tons in 1931. Of the remaining 5,000 workpeople, 2,500 are employed in the woollen industry, 1,500 in the flax industry and 1,000 in the clothing and dyeing industries. About 70 per cent. of the capital invested in the Latvian textile industry is of foreign origin (British, German, pre-war Russian and Dutch). (1 lat = 13½d. at current rate of exchange). (*Textile Weekly.*)

LIMITATION OF IMPORTS IN GREECE.

A news item from Athens states that the quantity of ginned cotton to be imported from the middle of November, 1932, to the middle of May, 1933, is fixed at 4,826 metric tons (1 metric ton equals about 4.4 equivalent 500-lb. bales). The quota for the period from May 15 to November 15, 1932, was 5,080 metric tons, according to the local press. After distribution of the quantities assigned to local importers the cotton will be distributed among local cotton spinners on the basis of the number of spindles in each mill. Distribution is to be made by the Central Distribution Committee after consultation with the Textile Manufacturers' Association and the appropriate chambers of commerce.

U.S.S.R. TEXTILE WAGE AGREEMENTS.

The various Soviet Commissariats for industry have issued the terms of the new wages agreements for 1933. These include not only wage rates, but the plan of production. The terms for the *light industries*, which include textiles, are:—

Production in 1933 is to be brought up to 8,808 million roubles, i.e., an increase of 10 per cent. over the previous year.

The productivity of labour must be raised by 12 per cent. and production costs lowered by 3 per cent.

Wages in the light industries as a whole are to be raised by 10.9 per cent., and in the textile industries as follows: Cotton textiles, 17.1 per cent.; linen textiles, 25 per cent.; hemp and jute, 14.3 per cent.; woollen textiles, 10.7 per cent.

Allocations for housing and other social services for the workers in the light industries, 138 million roubles; extension of suburban food-growing enterprises, 35 million roubles; for increased supplies, seven million roubles; for protection of labour against accidents, 10 million roubles.

(One rouble equals about 3s. at present.)

U.S.S.R.

According to a United States Commerce Report, a marked modification in the plan for expansion of cotton textile output in Russia is indicated in the latest reports available. The planned output of finished cotton cloth in Russia in 1933 is now placed at 2,750,000,000 metres (3,007,000,000 yards) as compared with the planned output of 3,061,000,000 metres (3,348,000,000 yards) for 1932. Preliminary figures for 1932 production of cotton textile fabrics indicate an actual output of approximately 2,400,000,000 metres or 2,625,000,000 yards. The new plan, therefore, calls for an increase of about 15 per cent. instead of 28 per cent. The 1932 production as now indicated was apparently about 7 per cent. above that of 1931. There are, however, conflicting reports as to the 1931 production.

Latvian cotton mills are reported to be operating about 90 per cent. of capacity. Stocks of cotton goods are said to be low.

BRAZIL.

CONSUMPTION OF COTTON.

The Ministry of Agriculture has published the figures relating to the consumption of cotton in Brazil during last year, subject, however, to rectification, together with the stocks existent in the various states, as follows:—

States	Consumption, 1932 (kilos)			Stocks on Dec. 31 1932
	1st half	2nd half	Total	
Pará	—	—	—	880,000
Maranhão	1,352,556	1,072,515	2,425,071	720,789
Piauhy	—	—	—	77,177
Ceará	1,336,439	1,063,375	2,399,814	617,414
Rio Grande do Dorte	95,030	86,232	181,262	770,000
Parahyba	1,152,755	957,510	2,110,265	2,301,969
Pernambuco	4,590,012	4,229,156	8,819,168	3,809,923
Alagôas	2,213,861	2,241,478	4,455,339	622,645
Sergipe	2,025,397	1,918,704	3,944,101	663,593
Bahia	1,390,479	1,565,668	2,956,147	254,804
Espirito Santo	170,000	210,000	380,000	—
Rio de Janeiro	3,850,000	4,650,000	8,500,000	—
Federal District	6,000,000	7,500,000	13,500,000	2,112,000
Minas Geraes	3,900,000	4,450,000	8,350,000	—
São Paulo	14,200,000	16,300,000	30,500,000	5,000,000
Paraná	30,000	30,500	60,500	—
Santa Catharina	650,000	680,000	1,330,000	—
Rio Grande do Sul	280,000	270,000	550,000	—
	43,236,529	47,225,138	90,461,667	17,830,314

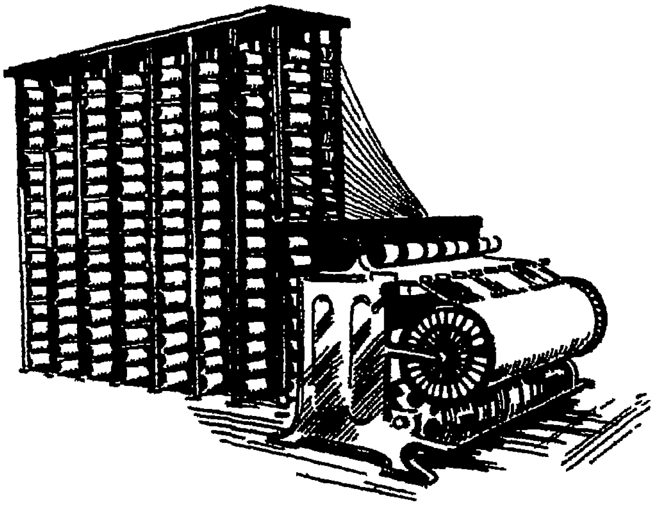
COLOMBIA.

The local cotton mill which operated an average of 32½ hours a week during 1931 is now operating 40 hours per week. American cotton is sometimes imported to supply the needs of the Barranquilla mill. However, this year's cotton crop was reported to be a good one and sufficient to supply the domestic needs.

COTTON SPINDLES IN THE SMALLER SUNDRY COUNTRIES.

(According to returns received by the International Cotton Federation.)

	1913	1920	1930	1933
Bulgaria	16,000	16,000	20,400	20,400
Turkey	40,000	40,000	99,164	100,400
Greece	63,898	73,898	212,000	230,700
Egypt	20,000	20,000	63,000	87,672
Indo-China	40,000	60,000	70,000	60,000
Argentine	7,000	15,000	27,592	46,002
Peru	45,000	50,000	55,000	85,925
Colombia	20,000	25,000	44,366	44,366
Ecuador	5,000	5,000	35,000	40,368
Venezuela	11,000	19,000	48,000	46,632
Guatemala	4,000	5,000	5,000	5,000
Australia	—	—	24,000	23,940
Cyprus	1,800	1,800	1,800	1,888
Yugo-Slavia	in Austria	75,000	145,400	146,408
Bolivia	—	—	6,000	6,000
Roumania	5,000	23,000	34,000	34,000
Esthonia	in Russia	—	557,000	558,694
Latvia	„	16,000	118,000	127,624
Korea	—	—	31,000	31,000
Persia	—	15,000	40,000	40,000



MISCELLANEOUS

BRITISH EMPIRE COTTON CROWING.

A Standing Committee of the House of Commons recently had under consideration the Cotton Industries Bill, which proposes to prolong the duration of the Cotton Industry Act 1923 (which expires on July 17 next) for five years

The Bill also substitutes a contribution at the rate of 1d per 500 lbs gross instead of 3d payable by cotton spinners to the Empire Cotton Growing Corporation

The clauses of the Bill were agreed to without discussion, and the measure was reported without amendment for the third reading

Since July 18 1930, the 1d per 500 lbs gross rate has operated

REDUCED FREIGHT RATES ON COTTON TO CZECHOSLOVAKIA.

Freight rates on transit shipments of cotton from Bremen and Hamburg have been reduced to such an extent that it is thought to be no longer to the advantage of the spinners in Czechoslovakia to route their shipments through Gdynia instead of through the German ports, according to the *Frankfurter Zeitung* The reduction of the freight rates is a result of the negotiations between the German railways, the Czechoslovak cotton spinners and the Bremen Cotton Exchange

It is further reported that negotiations are to be commenced shortly between Poland and Czechoslovakia with a view to making Gdynia a free port for Czechoslovakia It is understood that the aim is to attract Czechoslovakian exporting industries to Gdynia namely those dependent on the import of raw materials, these would be worked up in Gdynia and exported from there

PER CAPITA CONSUMPTION OF COTTON GOODS IN U.S.A.

According to statistics recently issued, the per capita consumption of cotton goods in the United States in 1932 amounted to 48 86 square yards, compared with 54 88 square yards in 1931, and 50 14 square yards in 1930 Ten years ago, i e, 1922, the per capita consumption was 71 89 square yards

U.S. NATIONAL COTTON WEEK TO BE HELD AGAIN.

National cotton week will be held this year in the United States from May 15 to May 20. As was the case in former years, the purpose of this " week " will be to aid in the promotion of the sales of various types of cotton goods and apparel and to centre the attention of the consuming public on the style and quality developments that have taken place in cotton manufacturing. It is reported that more than 25,000 retail establishments will actively participate in this annual celebration of the cotton industry.

EFFORT TO INCORPORATE MOTH REPELLANTS IN DYESTUFFS IN U.S.A.

Recognizing the extent of the ravages of the clothes-moth and the fact that its damages run into millions of dollars, Mr. H. E. Ritchey, Textile Foundation Research Fellow, is attempting to develop moth-repellant textile dyes to provide " built-in " protection. While many of the patented mothproof agents are effective, it is believed that the chief difficulty lies in defective methods of application.

One commercial dye which is moth-repellant is reported on the market, but for practical commercial purposes and widespread mothproofing through such means, it is recognized that it will be necessary to develop a wide range of such dyes. This research study aims to determine the retention properties of a moth repellant when combined with dyes and the effects of such a combination upon the qualities of the dyes.

(*United States Department of Commerce.*)

GRADE AND STAPLE REPORT DATES.

Reports on the grade and staple of the 1933-34 cotton crop will be released by the Bureau of Agricultural Economics, U.S. Department of Agriculture, on the following dates:—

November 3, 1933 (12 o'clock noon):—
On cotton ginned prior to October 1, 1933.

December 1, 1933 (12 o'clock noon):—
On cotton ginned prior to November 1, 1933.

January 5, 1934 (12 o'clock noon):—
On cotton ginned prior to December 1, 1933.

April 13, 1934 (12 o'clock noon):—
On the total crop.

No definite date has as yet been determined for the release of the report on the grade and staple of cotton on hand on August 1.

RUSSIAN COTTON IN GREAT BRITAIN

It is reported that imports of Russian cotton at Liverpool in 1932 amounted to 67 000 bales This figure is considerably below the imports for 1931 and it is expected that the imports for the current year will show a further decline Port stocks of Russian cotton at the end of January 1933 amounted to 58 000 bales against 101 000 bales at the end of January 1932

TWISTLESS YARN

An entirely new and novel type of yarn has recently been put on the market

The yarn is known as Rayallen and does not contain any twist whatsoever when woven into cloth the yarn which is used as weft imparts a silky and soft finish and is said to be no weaker than cloth made of ordinary yarn

The yarn is manufactured by coating the yarn with an adhesive by means of a coating machine which precedes the spinning frames after being woven the adhesive is washed out of the cloth prior to finishing

Knitted fabrics made of this yarn also show a decided lustre and soft feel The name of the firm producing the yarn is Rayallen Ltd Hill End Holcombe Nr Bury

COTTON TRADE STATISTICS

UNITED KINGDOM.

YARN EXPORTS FROM THE UNITED KINGDOM

	Three months ended March 31.		
	1931	1932	1933
	lb.	lb.	lb.
Soviet Union (Russia)	87,300	1,000	—
Sweden	329,000	740,600	734,900
Norway	900,500	1,633,500	966,600
Denmark	393,600	651,200	721,100
Poland (including Dantzig)	228,900	309,900	816,400
Germany	6,861,900	8,843,100	7,521,900
Netherlands	5,959,200	5,377,200	3,158,400
Belgium	1,243,800	969,400	1,454,000
France	1,328,600	277,000	241,700
Switzerland	1,559,200	1,019,600	893,400
Italy	97,200	121,900	178,800
Austria	249,700	248,200	196,500
Czecho-Slovakia	483,700	452,800	261,000
Yugoslavia	756,900	740,200	669,600
Bulgaria	405,700	712,000	302,900
Roumania	1,837,800	3,577,000	4,862,600
Turkey	134,100	306,400	415,100
China (including Hong Kong)	711,500	6,441,100	436,700
United States of America	335,300	312,300	248,900
Brazil	493,300	338,800	868,100
Argentine Republic	503,100	924,500	1,347,500
British India—			
Bombay, via Karachi	78,700	81,500	103,300
Bombay, via Other Ports	740,600	947,300	590,600
Bombay (Total)	819,300	1,028,800	693,900
Madras	1,206,400	2,219,000	1,319,900
Bengal, Assam, Bihar and Orissa	677,000	643,800	566,100
Burma	115,300	251,500	150,200
British Malaya	35,700	109,100	45,600
Australia	675,400	1,305,800	1,467,100
Canada	365,300	525,500	648,400
Other Countries	2,608,000	3,592,300	4,113,100
Counts—			
Up to 40.s	15,105,200	21,047,900	19,305,800
Over 40's up to 80's	11,944,300	17,517,700	11,600,400
Over 80's up to 120's	3,928,300	4,534,600	3,986,700
Over 120's	425,800	573,300	407,500
Grey, Unbleached	28,219,200	39,450,000	30,906,300
Bleached and Dyed	3,184,400	4,223,500	4,394,100

	March		Three months ended March 31	
	lb.	£	lb.	£
1913	17,212,000	1,184,159	53,067,000	3,725,282
1931	10,805,900	939,558	31,403,600	2,716,705
1932	13,892,400	1,012,621	43,673,500	3,228,225
1933	12,773,200	957,034	35,300,400	2,587,366

CLOTH EXPORTS FROM THE UNITED KINGDOM.

	Three months ended March 31.		
	1931 sq. yds.	1932 sq. yds.	1933 sq. yds.
Sweden	5,548,600	6,705,900	4,820,800
Norway	3,861,500	6,239,400	4,102,500
Denmark	7,248,100	9,282,900	12,081,400
Germany	8,557,700	7,619,400	7,905,600
Netherlands	5,370,400	11,418,900	5,863,900
Belgium	4,708,100	4,325,900	4,215,700
France	1,830,800	596,600	1,009,900
Switzerland	11,313,900	11,133,100	16,824,000
Portugal, Azores and Madeira	2,894,500	2,177,200	2,392,400
Spain and Canary Islands	660,900	930,600	939,800
Italy	1,069,000	684,800	1,085,300
Austria	1,257,800	1,877,500	1,329,300
Greece	9,351,700	7,762,500	6,218,100
Roumania	2,748,400	3,727,700	2,902,700
Turkey	14,713,000	5,490,800	10,327,200
Syria	4,016,700	2,293,300	1,788,200
Egypt	13,999,000	19,242,700	21,972,600
Morocco	8,151,900	10,687,500	11,417,100
Foreign West Africa	7,099,400	10,227,300	15,920,400
Foreign East Africa	1,638,700	1,902,700	2,565,500
Iraq	7,224,900	14,102,600	4,155,900
Persia	1,870,700	6,597,700	1,718,600
Dutch East Indies	10,499,100	13,423,100	5,284,300
Philippine Islands	1,284,400	1,039,600	816,000
Siam	2,659,000	1,763,500	2,529,600
China	13,735,800	41,925,000	17,276,500
Japan	1,256,000	1,467,700	813,300
United States of America	3,113,600	2,590,700	3,437,100
Cuba	1,753,400	1,201,400	1,484,900
Mexico	1,069,200	396,400	607,400
Central America	1,979,400	2,192,200	4,045,900
Colombia	8,343,400	7,296,600	15,950,700
Venezuela	4,277,900	4,910,000	7,192,000
Ecuador	1,366,500	678,800	1,335,600
Peru	1,125,600	2,225,100	1,306,700
Chile	2,134,700	1,012,600	790,900
Brazil	972,100	606,500	1,294,800
Uruguay	3,165,200	1,506,700	2,839,000
Bolivia	225,400	321,100	194,400
Argentine Republic	21,019,500	20,858,600	31,900,600
Irish Free State	6,275,700	6,853,700	7,295,100
British West Africa	19,430,200	34,730,000	38,229,400
British South Africa	12,428,800	11,214,800	25,811,800
British East Africa	2,707,500	3,533,300	2,669,500
British India—			
Bombay, via Karachi	41,130,700	50,947,400	64,788,500
Bombay, via Other Ports	13,909,300	23,653,500	35,216,800
Bombay (Total)	55,040,000	74,600,900	100,005,300
Madras	16,940,300	13,170,400	13,058,500
Bengal, Assam, Bihar and Orissa	20,919,200	25,925,800	55,612,000
Burma	7,399,800	12,275,900	6,974,500
British Malaya	4,385,300	12,364,900	6,792,000
Ceylon	3,765,200	3,850,700	3,137,000
Hong Kong	23,940,500	33,710,400	14,048,100
Australia	24,973,300	36,113,700	39,192,700
New Zealand	5,382,900	10,121,400	8,350,500
Canada	5,819,900	8,240,500	9,849,400
British West India Islands and British Guiana	3,021,600	5,597,500	6,254,500
Other Countries	20,864,200	20,184,100	23,817,500

CLOTH EXPORTS FROM THE UNITED KINGDOM—*Contd.*

	Three months ended March 31. 1931 sq. yds.	1932 sq yds.	1933 sq. yds.
Grey, Unbleached	66,851,000	98,482,700	108,092,800
Bleached	167,983,600	198,093,300	210,464,200
Printed	70,825,000	90,213,600	97,015,900
Dyed in the Piece	108,400,600	146,148,100	156,047,100
Manufactured of Dyed Yarn	24,350,100	29,992,900	30,134,400

	March sq. yds.	March lin. yds.	March £	Three months ended March 31 sq. yds.	Three months ended March 31 lin. yds.	Three months ended March 31 £
1913 ..	—	560,905,000	7,616,417	—	1,773,424,100	24,040,540
1931 ..	136,444,400	142,481,300	3,161,485	438,410,300	461,214,000	10,276,796
1932 ..	202,586,900	216,140,900	4,100,742	562,930,600	597,444,900	11,332,501
1933 ..	209,852,300	215,949,400	4,064,832	601,754,400	622,247,500	11,604,547

EXPORTS OF COTTON AND ARTIFICIAL SILK MIXED PIECE GOODS FROM THE UNITED KINGDOM.

Country	Exports during 12 months ending December, 1932 sq. yds.	£	Compared + or — with Exports 12 months ending December, 1931 sq. yds.
British India	6,181,456	151,747	+ 4,414,498
Australia	6,155,762	327,982	+ 1,915,500
Canada	4,603,164	217,397	+ 2,660
British South Africa	2,748,780	167,387	— 1,129,600
New Zealand	2,591,477	147,414	+ 924,300
British West Africa	1,948,444	61,962	+ 748,314
Netherlands	1,862,589	84,151	+ 1,258,655
Dutch East Indies	1,729,233	62,942	+ 769,655
China (including Hong Kong) ..	1,101,364	50,795	+ 370,792
Argentina	821,547	46,000	+ 36,795
Egypt	771,435	26,549	— 229,997
Ceylon	714,630	14,548	+ 318,704
Straits Settlements and Malay States	497,274	23,572	+ 364,074
Other countries	12,606,181	537,541	—
Total—all markets	44,333,336	1,910,987	+20,678,773 + £298,643

ITALY.

ITALIAN IMPORTS OF COTTON GOODS, JAN. 1 to DEC. 31, 1932.

Country of Origin	Cotton Waste Q.li	%	Unmercerized yarn Q.li	%	Bleached yarn Q.li	%	Unmercerized cloth Q.li	%	Velvet Q.li	%
Austria	—	—	—	—	—	—	212	3	—	—
Belgium	—	—	—	—	243	12	101	2	4	—
Czecho-Slovakia ..	—	—	—	—	—	—	949	16	55	22
France	2,713	7	257	12	1,197	63	337	5	10	4
Germany	10,008	25	30	2	409	20	1,389	23	102	41
Great Britain	3,503	9	1,609	76	57	3	1,833	31	54	22
Switzerland	3,613	9	159	8	—	—	283	5	1	—
Japan	116	—	—	—	—	—	165	3	—	—
British India	5,627	14	—	—	—	—	—	—	—	—
Egypt	—	—	—	—	—	—	—	—	—	—
Tunis	—	—	—	—	—	—	—	—	—	—
U.S.A.	10,143	26	—	—	—	—	196	3	—	—
Other Countries ..	3,836	10	40	2	34	2	590	9	24	11
Total 1932 ..	39,559	100	2,113	100	1,040	100	6,055	100	247	100
Total 1931 ..	50,736	—	3,354	—	3,161	—	7,684	—	953	—

ITALIAN EXPORTS OF COTTON YARN, JAN. 1 TO DEC. 31, 1932.

	YARNS.					
	Unmercerized		Mercerized		Bleached	
Country of Origin	Q li	%	Q.li	%	Q li	%
Albania	1,754	1	—	—	97	1
Austria	15,409	5	68	1	—	—
Belgium	—	—	—	—	—	—
Bulgaria	43,731	16	328	4	6	-
Czecho-Slovakia	—	—	—		-	—
Denmark	—	—	—	—	—	—
France	94	—	—	—	—	—
Germany	2,768	1	—	—	—	—
Great Britain	—	—	—	—	—	—
Greece	1,163	—	164	2	641	7
Yugoslavia	40,857	15	1,010	12	1,647	19
Lettland	—	—	—	—	—	—
Lithuania	—	—	—	—	—	—
Malta	412	—	—	—	92	1
Norway	—	—	—	—	—	—
Netherlands	—	—	—	—	—	—
Poland	—	—	—	—	—	—
Roumania	85,275	31	1,347	16	2,248	26
Russia	—	—	—	—	—	—
Spain	—	—	—	—	—	—
Sweden	—	—	—	—	—	—
Switzerland	5,743	2	—	—	—	—
Turkey in Europe	8,542	3	1,282	15	40	—
Hungary	—	—	166	1	1	—
Cyprus	—	—	32	—	—	—
China	—	—	—	—	—	—
Aegean Islands	—	—	—	—	—	—
Georgia	—	—	—	—	—	—
British India and Ceylon	83	—	2	—	—	—
Dutch East Indies	—	—	—	—	—	—
Mesopotamia	—	—	—	—	—	—
Palestine	—	—	—	—	—	—
Syria	—	—	—	—	—	—
Fed Malay States	—	—	—	—	—	—
Turkey in Asia	5,232	2	348	4	1,309	15
British Central Africa	—	—	—	—	—	—
Portuguese Africa	—	—	—	—	—	—
British Colonies in Africa	—	—	—	—	—	—
Spanish Africa	—	—	—	—	—	—
Egypt	2,514	1	78	1	1,018	12
Eritrea	5,616	2	—	—	—	—
Lybia	2,968	1	—	—	158	2
Morocco	2,856	1	331	4	402	5
Italian Somaliland	—	—	—	—	—	—
Tunis	1,618	1	—	—	13	—
Argentina	29,016	10	2,576	29	97	1
Brazil	142	—	—	—	—	—
Canada	—	—	—	—	—	—
Chili	842	—	—	—	71	1
Colombia	—	—	—	—	—	—
Costa Rica	—	—	—	—	—	—
Cuba	—	—	—	—	—	—
Ecuador	—	—	—	—	—	—
Mexico	—	—	—	—	—	—
Panama	—	—	—	—	—	—
Peru	—	—	—	—	—	—
U.S.A.	—	—	—	—	—	—
Uruguay	6,336	2	—	—	—	—
Venezuela	—	—	—	—	—	—
Other Countries	16,424	6	924	11	827	10
Total 1932	279,395	100	8,656	100	8,667	100
Total 1931	263,072	—	11,999	—	8,542	—

ITALIAN EXPORTS OF COTTON PIECE GOODS JAN. 1 to DEC. 31, 1932.

Country of Origin	Piece Goods. Unmercerized Q.li	%	Mercerized Q.li	%	Mixed with rayon Q.li	%	Others Q.li	%
Albania	4,918	1	111	1	71	1	39	—
Austria	625	—	38	—	—	—	—	—
Belgium	—	—	—	—	—	—	21	—
Bulgaria	1,125	—	67	1	15	—	—	—
Czecho-Slovakia	—	—	—	—	—	—	—	—
Denmark	—	—	—	—	—	—	—	—
France	1,080	—	13	—	—	—	2,272	21
Germany	398	—	33	—	6	—	94	1
Great Britain	2,274	1	—	—	71	1	921	8
Greece	6,099	2	232	3	161	2	20	—
Yugoslavia	8,202	3	384	5	37	1	146	1
Lettland	—	—	33	—	—	—	—	—
Lithuania	—	—	82	1	—	—	—	—
Malta	1,943	1	—	—	—	—	30	—
Norway	—	—	130	2	—	—	—	—
Netherlands	1,009	—	238	3	7	—	648	6
Poland	—	—	—	—	—	—	—	—
Roumania	9,968	3	1,312	16	—	—	90	1
Russia	—	—	—	—	—	—	—	—
Spain	—	—	—	—	—	—	—	—
Sweden	—	—	—	—	—	—	—	—
Switzerland	1,226	—	190	2	—	—	240	2
Turkey in Europe	15,816	5	319	4	1,438	20	4	—
Hungary	96	—	11	—	—	—	30	—
Cyprus	—	—	—	—	—	—	—	—
China	2,345	1	—	—	—	—	—	—
Aegean Islands	545	—	—	—	—	—	56	1
Georgia	—	—	—	—	—	—	-	—
British India & Ceylon	11,937	4	154	2	100	1	—	—
Dutch East Indies	5,479	2	21	—	39	1	—	—
Mesopotamia	6,077	2	—	—	106	1	—	—
Palestine	3,753	1	235	3	54	1	—	—
Syria	—	—	510	6	217	3	—	—
Fed. Malay States	960	-	—	—	-	—	—	—
Turkey in Asia	17,455	5	651	8	2,175	32	—	—
British Central Africa	6,567	2	—	—	—	—	37	—
Portuguese Africa	—	—	—	—	—	—	201	2
British Colonies in Africa	—	—	—	—	24	—	40	—
Spanish Africa	—	—	—	—	—	—	—	—
Egypt	46,846	14	806	10	165	2	145	1
Eritrea	19,953	6	—	—	—	—	—	—
Lybia	9,379	3	—	—	68	1	291	3
Morocco	17,232	5	854	10	1,987	28	—	—
Italian Somaliland	7,660	2	—	—	—	—	—	—
Tunis	419	—	183	2	—	—	257	2
Argentina	78,014	25	427	5	39	1	37	—
Brazil	128	—	109	1	—	—	—	—
Canada	—	—	—	—	—	—	94	1
Chili	663	—	12	—	—	—	11	—
Colombia	—	—	48	1	—	—	12	—
Costa Rica	84	—	—	—	—	—	—	—
Cuba	309	—	—	—	—	—	—	—
Ecuador	96	—	—	—	—	—	—	—
Mexico	24	—	1	—	—	—	—	—
Panama	25	—	—	—	—	—	—	—
Peru	1,731	1	82	1	24	—	—	—
U.S.A.	4,444	1	110	1	31	—	4,917	44
Uruguay	3,458	1	—	—	—	—	4	—
Venezuela	1,330	—	—	—	—	—	—	—
Other Countries	30,119	9	1,053	12	317	4	725	6
Total 1932	331,811	100	8,449	100	7,152	100	11,382	100
Total 1931	367,208	—	11,169	—	4,080	—	11,213	—

ITALIAN EXPORTS OF RAYON YARNS.

To	Year 1932	Year 1931
	Metric Tons	
Germany	4,083	4,830
British India	2,830	1,891
China	2,327	5,913
Spain	1,575	1,465
Switzerland	1,451	1,468
Austria	737	1,470
France	666	457
Egypt	326	283
Portugal	288	187
Great Britain	276	174
Argentine	243	246
Japan	171	776
Sweden	170	71
Roumania	147	140
Yugoslavia	135	216
Belgium	134	99
Czechoslovakia	105	26
Others	1,250	1,266
Total	16,914	20,987

ITALIAN EXPORTS OF ALL-RAYON FABRICS

To	1932	1931
	Metric Tons	
Great Britain	284	282
British India	208	91
Holland	197	102
Egypt	145	333
United States	144	81
Argentine	131	224
Uruguay	95	111
Others	852	895
Total	2,056	2,119

ITALIAN EXPORTS OF COTTON AND RAYON MIXTURES.

To	1932	1931
	Metric Tons	
United States	1,352	916
Morocco	668	637
Argentine	234	394
Egypt	194	845
Great Britain	169	128
British India	159	278
Mesopotamia	126	234
Turkey	116	135
Syria	109	253
Others	827	1,078
Total	3,954	4,898

JAPAN.

QUANTITIES AND VALUE OF COTTON CLOTHS EXPORTED FROM JAPAN DURING 1932 AND 1931.

	Grey Cloth		Bleached Cotton Piece Goods		Printed and Yarn-dyed Cotton Piece Goods		
	Total for Year ending Dec., 1932	Total for Year ending Dec., 1931	Total for Year ending Dec., 1932	Total for Year ending Dec., 1931	Total for Year ending Dec., 1932	Total for Year ending Dec., 1931	
Shanghai ..	9,866,913	20,671,949	5,249,007	25,642,102	19,891,222	86,207,460	sq. yds.
	1,410,392	2,419,831	840,271	3,810,781	4,378,255	18,031,485	yen
Tientsin ..	5,068,412	7,915,494	14,689,963	8,439,806	52,968,743	34,175,896	sq. yds.
	767,213	1,143,917	2,062,331	1,213,530	11,345,861	6,563,327	yen
Tsingtao ..	2,087,982	1,838,594	8,691,686	5,120,339	56,421,192	16,955,736	sq. yds.
	337,429	266,849	1,247,721	733,518	12,482,088	3,418,828	yen
Dairen ..	34,858,070	12,971,844	8,728,482	6,408,892	45,217,888	18,208,582	sq. yds
	5,169,996	1,720,710	1,199,913	854,788	9,125,860	3,541,108	yen
Hankow ..	77,468	588,585	4,432,619	2,948,945	7,780,366	4,475,612	sq yds.
	11,800	82,183	649,817	421,752	1,591,043	871,665	yen
Manchuria ..	4,877,147	6,025,747	1,203,928	3,438,266	9,085,564	11,581,494	sq. yds.
	768,772	812,080	175,499	484,110	2,316,777	2,244,809	yen
Other China	29,717	391,616	66,146	796,573	92,775	2,322,188	sq yds
	4,863	57,144	9,323	106,563	19,935	400,767	yen
Hong Kong	8,724,600	11,558,895	4,521,212	14,231,460	10,162,318	37,527,305	sq. yds
	1,264,755	1,510,519	625,325	2,010,150	1,865,454	6,214,610	yen
Siam ..	3,663,752	473,880	8,211,749	1,155,654	12,521,851	4,155,106	sq yds
	448,005	60,942	1,088,285	144,259	1,800,641	576,537	yen
Philippines ..	813,914	2,142,932	1,312,268	3,400,408	19,282,835	27,834,597	sq yds.
	96,491	297,457	180,349	483,234	2,491,528	3,380,457	yen
Dutch Indies	70,580,640	47,915,463	66,467,209	22,084,870	215,080,420	142,005,422	sq. yds.
	8,025,636	5,353,391	9,703,113	3,157,840	32,482,375	19,751,849	yen
Singapore ..	6,372,087	1,909,873	23,616,755	4,482,245	52,176,572	34,926,924	sq. yds.
	795,363	282,642	3,029,763	525,601	7,397,323	4,405,402	yen
Australia ..	20,049,787	12,700,204	3,129,283	951,620	13,983,348	7,734,718	sq. yds
	2,321,102	1,613,452	461,059	124,944	2,267,333	1,177,327	yen
British India	314,824,393	246,755,592	142,982,957	67,503,754	186,761,104	90,372,295	sq. yds
	34,654,150	28,051,791	18,638,443	8,559,736	27,342,988	13,299,274	yen
French India	372,350	265,277	169,336	—	11,280	3,374	sq. yds.
	36,179	30,621	21,800	—	1,947	2,250	yen
Egypt ..	88,055,134	56,239,787	20,605,676	3,147,768	86,842,885	43,505,442	sq. yds.
	10,970,755	7,950,485	2,875,290	408,596	13,219,155	6,492,157	yen
Other Africa	68,346,125	53,095,981	21,987,581	12,658,497	73,747,103	54,253,259	sq. yds.
	8,160,255	7,113,105	2,802,624	1,595,459	10,704,799	7,656,505	yen
Balkan States	22,232,778	9,008,307	3,985,739	781,167	15,996,550	8,578,136	sq. yds
	2,625,230	1,049,690	603,754	107,432	2,471,018	1,233,870	yen
Sth. America	8,682,187	8,187,276	3,879,952	870,861	14,373,799	7,521,101	sq. yds.
	1,243,392	1,148,533	640,805	128,924	2,233,416	986,697	yen
Aden ..	51,815,620	29,960,280	4,487,706	1,604,336	4,540,613	2,991,093	sq. yds.
	6,158,281	3,617,163	585,760	198,235	672,690	427,378	yen
Arabia, Persia	18,230,101	21,672,148	7,395,691	2,626,437	17,460,736	19,218,454	sq. yds.
	2,276,117	2,959,050	972,270	360,174	2,707,647	2,844,526	yen
Others ..	9,361,750	5,585,747	2,776,725	1,690,843	9,787,194	7,597,770	sq. yds.
	1,223,738	698,421	402,816	229,121	1,460,926	1,140,887	yen
Total ..	708,990,927	559,877,561	359,592,660	180,993,343	924,186,538	662,161,964	sq. yds.
	88,764,915	68,239,994	48,816,331	25,664,747	150,979,059	104.661,715	yen

QUANTITIES AND VALUE OF DYED, PRINTED AND YARN-DYED COTTON PIECE GOODS EXPORTED FROM JAPAN DURING 1932 & 1931.

	Year ending Dec 31st, 1932	Year ending Dec. 31st, 1931
Dyed drills	8,956,357	3,966,563 sq. yds
	1,540,263	640,174 yen
Dyed jeans	44,872,948	32,442,330 sq yds.
	6,753,781	4,456,857 yen
Printed jeans	120,419,148	90,052,318 sq. yds
	17,987,521	13,408,862 yen
T cloth	17,790,540	25,115,264 sq. yds
	2,487,075	3,185,153 yen
Dyed sateen drill	78,335,559	62,303,708 sq yds
	18,444,137	14,547,269 yen
Printed sateen drill	9,905,050	3,630,532 sq yds
	2,420,320	2,093,615 yen
Dyed shirting	45,174,000	46,039,231 sq yds.
	5,685,699	5,664,158 yen
Printed shirting	148,430,110	63,649,448 sq yds
	19,449,548	8,203,658 yen
Serge	53,467,876	29,357,345 sq. yds.
	12,280,612	6,540,583 yen
Striped drills, jeans, twills (yarn-dyed)	181,099,928	165,365,221 sq. yds
	26,085,997	23,003,387 yen
Twills and cords	10,898,526	6,695,718 sq yds
	2,347,060	1,346,837 yen
Dyed flannel	26,589,837	19,826,212 sq yds
	4,386,061	3,063,700 yen
Printed flannel	26,015,527	22,909,173 sq yds
	4,599,089	3,899,017 yen
Crape	28,138,467	22,397,058 sq yds
	3,357,555	2,684,377 yen
Poplin	14,109,648	6,587,226 sq. yds.
	3,166,761	1,548,364 yen
Others	109,983,017	56,824,617 sq. yds
	19,987,580	10,375,704 yen
Total	924,186,538	662,161,964 sq. yds.
	150,979,059	104,661,715 yen

QUANTITIES OF GREY COTTON PIECE GOODS EXPORTED FROM JAPAN DURING 1932 AND 1931,

	Year ending Dec 31st, 1932	Year ending Dec 31, 1931
Drills	23,862,061	24,333,568 sq. yds.
	3,594,277	3,813,958 yen
Jeans	9,096,525	9,617,252 sq. yds
	1,368,236	1,354,571 yen
Shirting: over 40 in	211,569,542	132,174,923 sq. yds.
	21,757,914	13,592,747 yen
under 40 in	152,655,715	120,160,715 sq. yds.
	18,561,558	14,395,195 yen
Sheeting	227,611,076	179,406,686 sq. yds.
	27,675,880	23,174,332 yen
Dhooty	64,468,004	68,289,507 sq. yds.
	7,337;477	8,091,575 yen
T cloth	34,227,963	14,272,997 sq. yds.
	3,814,708	1,694,635 yen
Imitation nankeens	13,036,537	2,467,802 sq. yds.
	2,086,029	329,555 yen
Flannels	2,199,906	1,785,035 sq. yds.
	449,246	334,500 yen
Sateen drill	3,277,644	1,913,424 sq. yds.
	577,937	288,222 yen
Canvas	3,765,475	3,652,970 sq. yds.
	1,117,483	948,492 yen
Others	3,220,479	1,802,664 sq. yds.
	424,170	222,212 yen
Total	748,990,927	559,877,561 sq. yds.
	88,764,915	68,239,994 yen

QUANTITIES AND VALUE OF BLEACHED COTTON PIECE GOODS EXPORTED FROM JAPAN DURING 1932 AND 1931.

	Year ending Dec. 31st, 1932	Year ending Dec. 31st, 1931
Drills and jeans	14,262,763	6,099,947 sq yds
	2,039,632	849,032 yen
Shirting, cambric nainsook, jaconet and mull		
Over 31 in.	304,505,884	163,004,188 sq. yds
	40,853,874	21,844,350 yen
Under 31 in	18,405,404	9,380,213 sq. yds
	2,634,161	1,421,616 yen
Crape	4,121,721	5,752,785 sq. yds.
	476,966	744,134 yen
Others	18,296,888	5,306,210 sq yds
	2,811,695	805 615 yen
Total	359,592,660	189,993,343 sq yds.
	48,816,331	25,664,747 yen

COTTON YARN EXPORTATION FROM JAPAN (WITH COUNTS) AT 40 BUNDLES.

Total from Jan 1 to Dec. 31, 1932.

For	20's	16's	14's & below	32's	40's	42's	43's & above	Total
Shanghai ..	2½	—	—	4	—	—	35½	42
Dairen ..	1,803½	853	272½	231	8½	412½	33	3,614
Manchuria via Antung ..	1,968	982	165	207	2½	970½	176	4,471
China ..	45	90	7	156	13½	694	111	1,116½
Hong Kong	789½	670	375	5,617½	25	888	49	8,414
Philippine ..	271½	—	½	120	223	6½	303½	925
Bombay ..	5,245½	—	—	2,143	2,024½	9,876	16,230	35,519
Calcutta ..	30	—	—	519½	5,147	985½	1,480	8,162
India ..	84	10	—	568	2,137½	1,814½	2,492½	7,106½
Dutch India	2,841	43½	269½	70½	3,153	568	382½	7,328
Sanfrancisco	345	—	7½		120	25	19	516½
Cen America	1,186½	178½	758	55½	199	—	18	2,395½
Egypt ..	1,831½	117	118	—	25	784½	15	2,891
Australia ..	540½	357	990	13½	4	40	44	1,989
Others ..	2,604½	27	23½	127½	298	1,653½	246	4,980
Total ..	19,588½	3,328	2,986½	9,833	13,380½	18,718½	21,635	89,470

U.S.S.R.

OUTPUT OF TEXTILES IN FEBRUARY, 1933.

		% of Plan.
Cotton yarn (tons)	27,956	100·7
Cotton unfinished goods (in 1,000 sq. metres) ..	225,069	99·6
Cotton finished goods (in 1,000 sq. metres) ..	214,000	103·5
Woollen yarn (tons)	3,856	95·6
Woollen unfinished goods (1,000 metres) ..	8,199	94·0
Woollen finished goods (1,000 metres)	7,784	92·8
Flax yarn (tons)	4,319	100·7
Linen (1,000 metres)	11,990	103·0
Socks and stockings (1,000,000 pairs)	12·4	82·3
Knitted underwear (in 1,000)	1,074	77·3
Knitted garments (in 1,000)	549	93·8
Footwear (in 1,000 pairs)	5,150	85·8

(*Narodny Bank*)

ESTIMATED PRODUCTION OF RAYON YARN BY COUNTRIES AND PROCESSES—YEAR 1932.

(In thousands of lbs)

(*Supplied by the Textile and Engineering Press Bureau Limited*)

Country	Viscose	Acetate	Cupra	Collodion	Total
Austria	880	—	—		880
Belgium	9 230	550	—		9 780
Brazil	550	175			725
Britain	58 185	13 650	720		72 555
Canada	5 675	1 440	—		7 115
Czecho Slovakia	5 655	—	—		5 655
France	43 075	4 180	—		47 255
Germany	47 555	2 345	6 180		56 080
Holland	19 405	—	—		19 405
Italy	65 835	1 890	1 650		69 375
Japan	63 150		1 275		64 425
Poland	7 260		—		7 260
Spain	5 400				5 400
Sweden	295				295
Switzerland	10 770	285			11 055
United States	104 215	16 325	4 445	6 105	131 090
Total	447 135	40 840	14 270	6 105	508 350

Reviews on Current Cotton Literature.

PATENTS SIMPLIFIED ' Written and published by Herbert J W Wildbore, Patent Agent, 101, Leadenhall Street, London, 5s net (bound octavo), and in pamphlet form, post free 8d

The subject of patents is essentially technical in nature, and this maybe accounts for the scarcity of handbooks adapted for the enlightenment of the ordinary reader Considering the compact form of Mr Wildbore's book, it is remarkable how comprehensive a survey it gives of the patent system prevailing in this country, and a further advantage is the fact that it takes notice of recent changes of the patent law effected by the Act of 1932 This book is well arranged and deals with all aspects of the subject in a manner making the whole easy to follow

"THE EMPIRE COTTON GROWING REVIEW," April, 1933 Published by P S King & Son Ltd London for the Empire Cotton Growing Corporation Price 1s Annual subscription, 5s post free

The current issue contains the following noteworthy articles — "The World's Cotton Supplies Why Empire Cotton is Still Needed," by J A Todd, "Cotton Diseases," by E J Butler, "Some Notes on Moco Cotton in Brazil," by S C Harland, 'Purity and Variability in Cotton," by C H Brown, "Rotation Crops,' by W L Fielding

"Economic Conditions in Brazil." Report by the Commercial Secretaries to H.M. Embassy, Rio de Janeiro, together with regional reports by H.M. Consular Officers at São Paulo, Porto Alegre, Bahia, Pernambuco and Para. Published for the Department of Overseas Trade by H.M. Stationery Office. Price 3s. 2d., post free.

In the section of the above report dealing with cotton, the writers state that in 1931 Brazil produced about 120,000 tons of raw cotton, consumed about 85,000 tons and exported approximately 21,000: the balance being held in stocks. The official production for 1931-32 crop was about 956,000 bales, or 80,000 more than in the previous year.

No reliable estimate for 1932-33 is yet available, but at the present exchange no great increase is to be expected.

"'Textile Recorder' Year Book, 1933." Edited by Mr. John Brooks. Published by Messrs. John Heywood Ltd., Manchester. The current issue of the "'Textile Recorder' Year Book" gives a great deal of statistical data, tables of production, etc., which are of great value for reference purposes. All these have been brought up to date and changes made whereby the figures are presented in more convenient form. Data relating to the silk and rayon industry has been expanded, and a new table of rayon production in the United Kingdom is provided. A revised list of British rayon producers shows numerous changes in the status of the firms in this branch of industry.

A bibliography of new textile inventions introduced during the past year affords a most useful reference to the new machines which are now available to the trade. The list of holidays in the textile districts appears again with appropriate new dates.

BOOKS RECEIVED.

"Weltwirtschaftliches Archiv." Edited by Dr. Bernhard Harms, of Kiel University. Published by Gustav Fischer, Jena.

"Economic Conditions in Hungary." Report by Dr. H. C. A. Carpenter, Commercial Secretary, late of H.M. Legation, Budapest. Published for the Department of Overseas Trade by H.M. Stationery Office. Price 2s. net.

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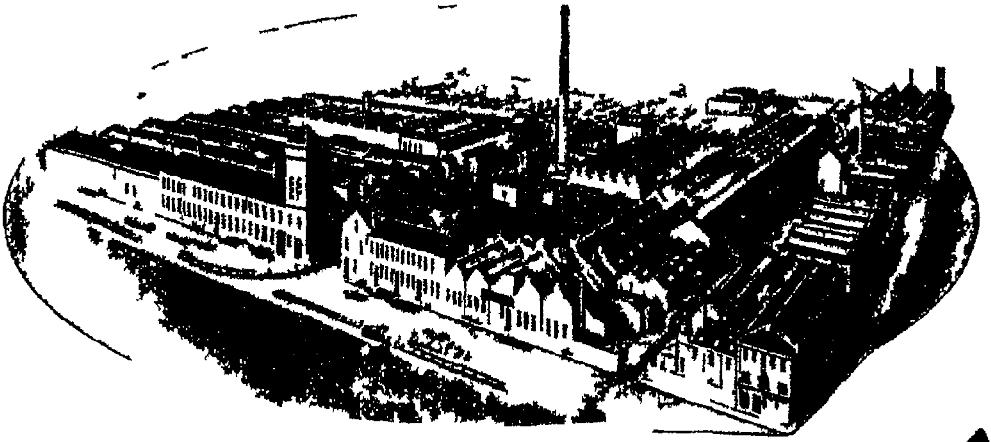
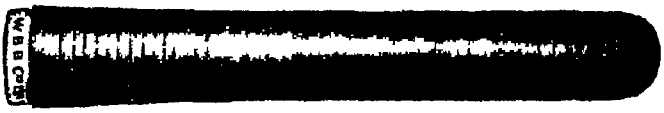
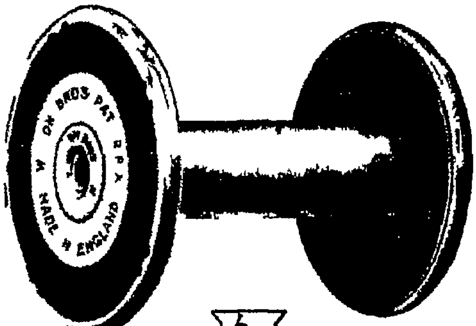
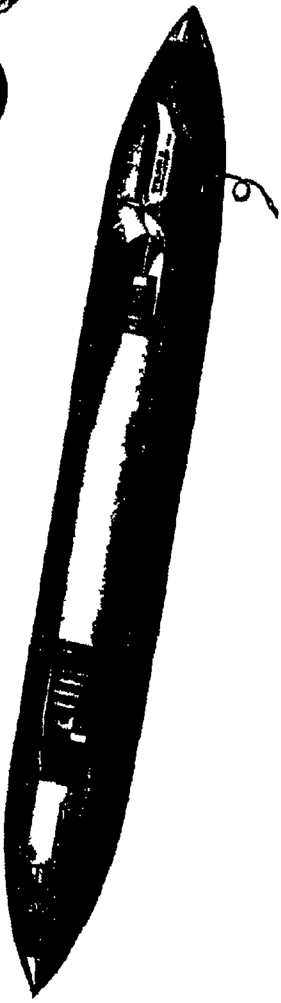
FOR THE TEXTILE TRADE









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Extract from recent Testimonials by users of Meynell's W.T.R. Investigation made by English firms who sent their Representatives to see the Meynell W.T.R. at work in a Continental mill.

(1) *" The mill people were not satisfied with high-draft yarn from a 4 line and decided to try the ——— top roller. The results were still worse. They then tried Meynell's W.T. Roller and the yarn produced is now stronger and more even than ever before. This same mill has the Meynell W.T.R. on Speedframes which also give satisfaction."*

(2) *" On a recent visit to ——— Mill, Mr. ——— went through the mill and saw the Meynell W.T. Roller at work on client's Intermediates (he had scrapped Rovings) and on Ringframes. Client stated that he is well satisfied with the results from Meynell W.T. Roller and that he is getting a stronger yarn from his 4 line system SINCE HE FITTED SAME WITH MEYNELL'S W.T. ROLLER, although he increased the draft from 13 to 16. The yarn spun was 21s from a 1·3 Hank Inter. from a mixing of Congo, Omrah and low short-staple American. Client expressed himself as particularly pleased with the Meynell W.T. Roller on the Intermediate frames, as apart from the saving in covering for the second and third lines, the minding of the frames was simpler owing to the absence of weights.*

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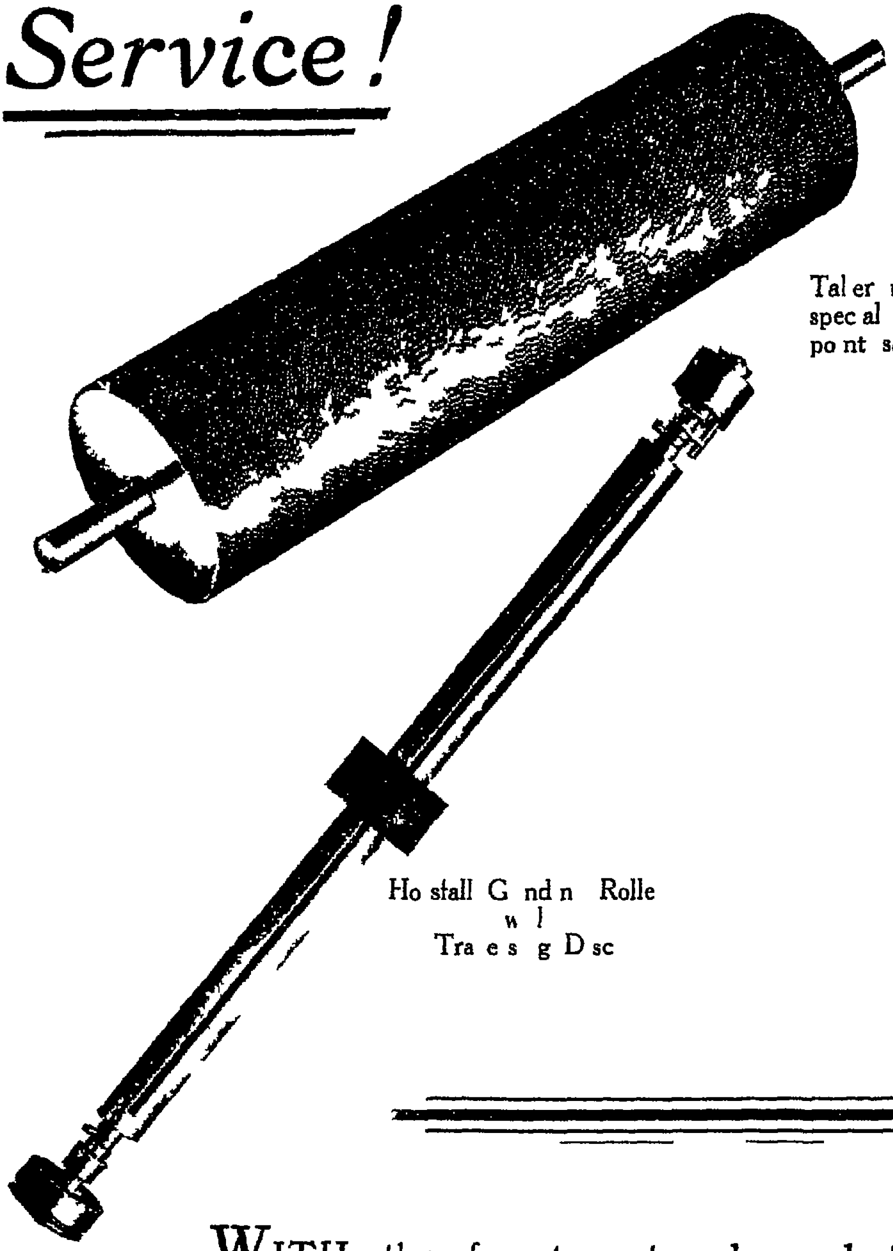

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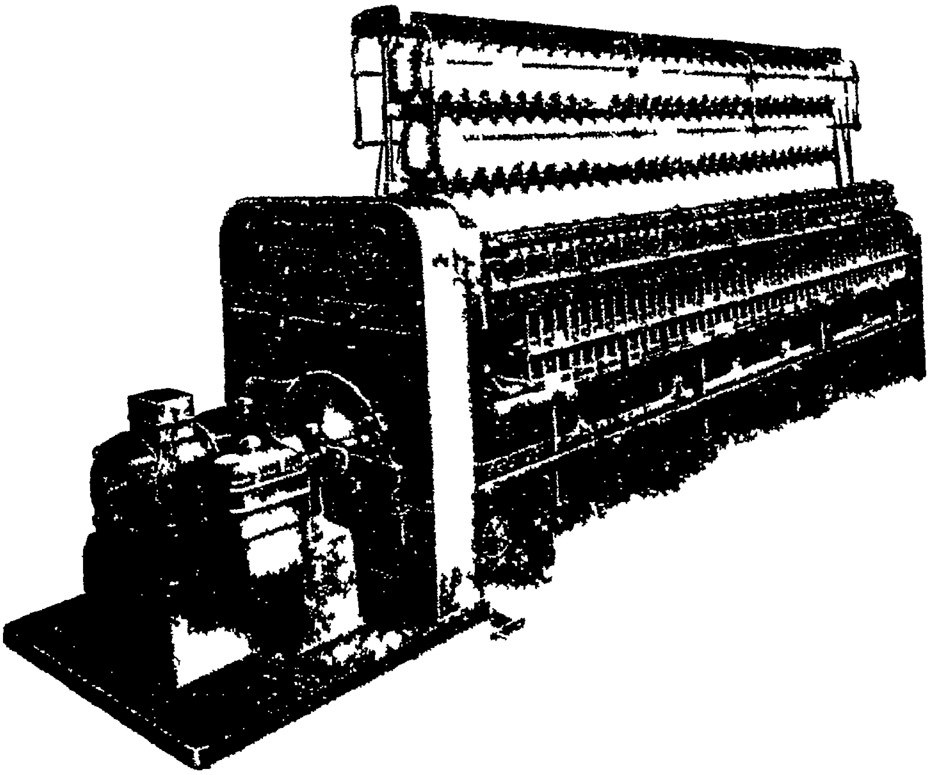

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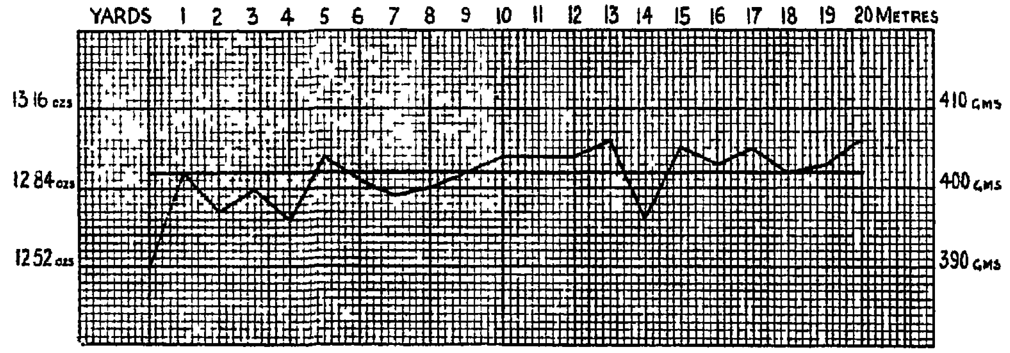

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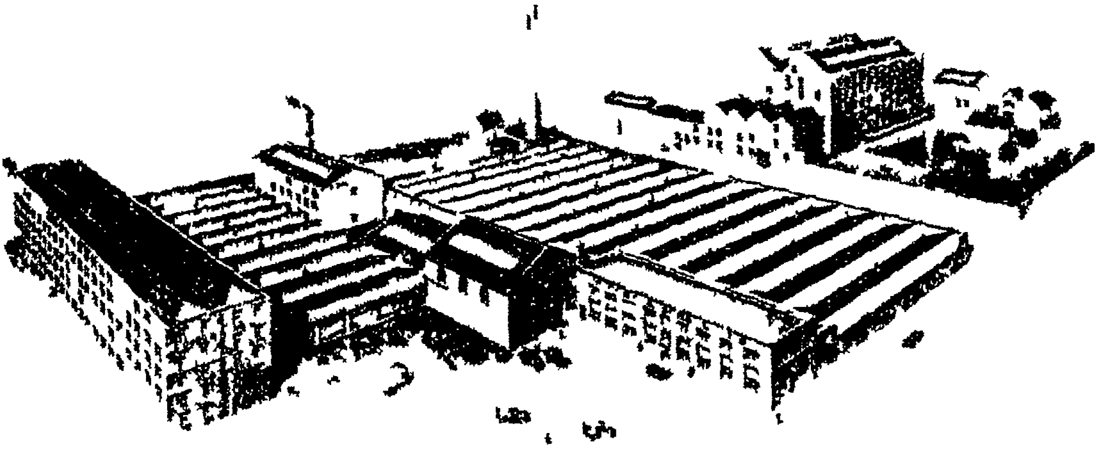

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TO THE

International Cotton Bulletins

No. I TO 4, REPRESENTING VOLUME I.

This Index should be inserted in BULLETIN *No.* 4. *The use of this carefully-prepared Index will be found extremely valuable in case of reference to the hundreds of questions dealt with in the* INTERNATIONAL COTTON BULLETIN.

PAGE

- Africa, South:
  - Cotton Growing 484
- American Cotton:
  - Acreage 114, 121, 252, 260, 354, 413G, 500
  - Average Prices 246
  - Boll-weevil 120, 123, 124, 250, 355, 501
  - Bureau Report 111, 248, 413G, 466
  - Consumption, 44, 316, 347, 412, 503
  - Co-operative Marketing ... 117
  - Errors—American Cotton Statistics 413G
  - Exports 116, 247, 261, 381, 517
  - Final Estimate ... 252, 413G
  - Ginners' Reports ... 251, 385
  - Hester's Report 115
  - Market Reports 124
  - Mill Stocks 46, 318
  - Spinners' Takings 517
  - Standards ... 367, 402, 417
  - Yields ... 354, 413H, 500
- Arbitration:
  - International Courts, 149, 275, 401
- Argentina:
  - Cotton Production 91
- Arghan 499
- Artificial Silk 499
- Australia:
  - Cotton Production ... 92, 485
- Austria:
  - Cotton Consumption 44, 316
  - Cotton Stocks ... 46, 318
  - Short Time 43, 315
  - State of Trade .. 4, 287
  - Unemployed Dole 400
- Automobiles—U.S.A. 310

- Basic Yarn Prices—England 414
- Belgium:
  - Cotton Consumption, 44, 59, 316, 331
  - Cotton Stocks ... 46, 318, 331
  - Short Time 43, 315, 403
  - State of Trade ... 8, 403
- Boll-weevil 120, 250
- Boll-weevil—Extent of damage 123, 124

PAGE

- Brazil:
  - Cotton Congress 93, 190, 192
  - Cotton Consumption 73, 346
  - Cotton Crop 134, 489
  - Cotton Exporters 366
  - Cotton Growing, 349, 360, 401, 486
  - Cotton Mills 487
  - Cotton Mill Stocks ... 73, 346
  - Cotton Report, 135, 257, 391, 514
- "BRAZILIAN COTTON," 95, 192, 198, 202, 204
- British Cotton Growing Association's Report 480
- Bulgaria:
  - Cotton Growing 95
- Bureau's System 112

- Calcium Arsenate 355
- Calmon. Miguel 286
- Canada:
  - Cotton Consumption 45, 317, 344
  - Cotton Stocks ... 47, 319, 344
  - Short Time 43, 315
- Carry-over:
  - All kinds 350, 353
  - American 115
- Ceará Cotton 360
- China:
  - Cotton Consumption 45, 342
  - Cotton Crop 246, 439
  - Cotton Exports 293
  - Cotton Growing 101, 212, 232
  - Cotton Imports ... 153, 439
  - Cotton Mills 81, 202, 214, 373, 438, 440
  - Cotton Mill Stocks ... 47, 342
  - Cotton Spindles 405
  - State of Trade 405
  - Tariff 442
- Coker, D. R., Hartsville, U.S.A. 121
- Columbia:
  - Cotton Growing 102
- Comparison Cotton Grey Cloth Prices 422
- Competition to Lancashire ... 455

PAGE

- Condition Report American Cotton 111, 248, 466
  - System Explanation 112, 413G
- Congo:
  - Cotton Growing 97
- Cost of Living:
  - England 154
- Cotton Breeding:
  - Dr. Balls 283
- Cotton Committee International 154
- Cotton Consumption:
  - England 210, 518
  - India 35
  - World 34, 44, 51, 518
  - Per Spindle (see International Cotton Statistics).
- Cotton Growing:
  - Argentina 491
  - Australia 92, 498
  - Belgian Congo 97, 370, 490
  - Brazil 93, 360, 486
  - British Empire 95, 480
  - Bulgaria 95
  - China 101, 232, 242
  - Colombia 102
  - Ecuador 241, 499
  - Fiji 105
  - French Colonies 492
  - French Niger 242
  - Government Subsidies 492
  - Haiti 105
  - India 244, 480, 493
  - Korea 106
  - Nyasaland 108, 484
  - Paraguay 107
  - Peru 107, 237
  - Porto Rico 108
  - Punjab 494
  - Russia 109, 240, 258, 513
  - Somali 490
  - Turkestan 109
  - Venezuela 241
- Cotton Mill Stocks 46, 519
- Cotton Production:
  - World 91
- Cotton Situation:
  - U.S. Department of Commerce 350
- Cotton Supply and Distribution 352
- Courts of Arbitration 401
- Czecho-Slovakia:
  - Cotton Consumption 44, 57, 316, 329
  - Cotton Mill Stocks 46, 318, 329
  - Short Time 43, 315
  - State of Trade 8, 294
  - Wages 294

- Damp in Cotton 145
- Demand—lack of—reasons 142
- Denmark:
  - Cotton Consumption 44, 66, 316, 338
  - Cotton Mill Stocks 46, 66, 318, 338
  - Short Time 43, 296, 315

PAGE

- Denmark—*continued*.
  - State of Trade 166
  - Wages 10, 296
- Dumont, Fazenda 202

- East Indian Cotton (see Indian Cotton).
- East India Cotton Association 132
- Economy Hints in Mills 470
- Efficiency Variations Weaving 462
- Egyptian Cotton:
  - Acreage 263
  - Alexandria General Produce Association 508
  - Characteristics 198
  - Cotton Freights 509
  - Crop Report 128, 257
  - Exports 129, 256, 264, 388
  - Foreign Matter 509
  - Market Reports 126, 253, 386, 506
  - Season's Production 127
  - Yield 263
- Egyptian Weights and Measures 130
- England:
  - Competition to 455
  - Cotton Consumption 44, 53, 316, 325
  - Cotton Mill Stocks, 45, 317, 325
  - Percentage of Home and Export Trade 448
  - Short Time 43, 53, 315
  - State of Trade 11, 21, 38, 177, 297, 406
  - 1870 Statistics 456
- Exchanges 37, 189
- Exports from:
  - China 293
  - Czecho-Slovakia 10, 295
  - Egypt 129, 246
  - England, 23, 26, 178, 298, 406
  - France 13, 300, 413C
  - Germany 311
  - India 217
  - Italy 17, 411
  - Japan 90
  - Sweden 174, 309, 411
  - Switzerland 21, 413B
  - U.S.A. 39, 116, 382, 413
- Export of Raw Cotton from Holland 407
- Export of Raw Cotton from Russia 413A
- Export of Raw Cotton from U.S.A. 381
- Exporters of Cotton from Brazil 366

- Fabric Gloves 11
- Factory Law:
  - Japan 305
  - U.S.A. 310, 452
- Far East:
  - Conditions 33
- Fiji:
  - Cotton Growing 105

PAGE

- Finland:
  - Cotton Consumption 44, 65, 316, 337
  - Cotton Mill Stocks 46, 65, 318, 337
  - Short Time 43, 315
  - Wages 13
- Fire Insurance 11
- Forty-eight hour week effect on:
  - Massachusetts 310
  - Mill Production 136
  - Switzerland 309
  - U.S.A. 452
- France:
  - Co-operative Insurance of Mills 356
  - Cotton Buying Company 413E
  - Cotton Consumption 44, 54, 316, 325
  - Cotton Mill Stocks 46, 318, 325
  - Effect of War on Industry 224
  - Exports 169
  - Short Time 43, 315
  - Spindles per District 224
  - State of Trade 13

- Germany:
  - Cotton Consumption 44, 55, 316, 325
  - Cotton Mill Stocks 46, 318, 325
  - Short Time 315
  - Spindles—Occupied Area 479
  - State of Trade 15, 311
  - Wages 15
- Ginners' Reports 251, 265, 385

- Haiti:
  - Cotton Growing 105
- Hankow 445
- Holland:
  - Cotton Consumption 44, 62, 318, 334
  - Cotton Mill Stocks 46, 62, 318, 334
  - Short Time 43, 315
  - State of Trade 15, 302, 407
  - Wages 15, 302
- Home Trade and Export:
  - Percentage of, in England 448

- Imports:
  - China (textiles) 153
  - Czecho-Slovakia (cotton) 295
  - Denmark 297
  - England 380
  - Germany 311
  - Holland 302
  - India 216
  - Italy 411
  - Portugal 307, 413A
  - Sweden 174, 308, 411
  - Switzerland 413B
  - U.S.A. 156

PAGE

- India:
  - Cotton Consumption, 35, 45, 68, 340
  - Cotton Mill Industry 433, 473
  - Cotton Mill Shares 83, 84, 218, 377
  - Cotton Mill Stocks 47, 68, 340
  - Cotton Statistics 262
  - Exports (cotton Goods) 217, 262, 435, 438
  - General Conditions 35, 303, 408
  - High Counts Spinning 409
  - Imports (cotton goods) 216, 425
  - Strike at Ahmedabad 376, 408, 413G
  - Trade with India (Review) 425
  - Wages 375
  - Workmen's Compensation Act 376
  - Yarn Production 86, 374
- Indian Central Cotton Committee 84, 105
- Indian Cotton:
  - Consumption 35, 45, 68, 340
  - Crop 131
  - Forecast 245, 389, 510
  - Shipments 131, 303
- Insurance of Mills:
  - France 356
- International Committee Meeting Lucerne 395
- International Consumption and Stock Statistics 42, 314, 402, 518
- Iraq:
  - Cotton Growing 485
- Irrigation Works:
  - Ceará 360
- Italy:
  - Cotton Consumption 44, 56, 316, 328
  - Cotton Mill Stocks 46, 318, 328
  - Short Time 43, 315
  - State of Trade 171, 303, 410, 472
  - Wages 16

- Japan:
  - Cotton Consumption 45, 69, 89, 317, 341, 468
  - Cotton Growing 106
  - Cotton Mills 87, 373, 467, 468
  - Cotton Mill Spindles 36, 305, 468
  - Cotton Mill Stocks 47, 69, 319, 341
  - Cotton Mill Wages 87
  - Exports (yarn and cloth) 90, 305, 374
  - Factory Law Revision 305
  - General Conditions 34
  - Imports 89
  - Raw Cotton Exchange 156
  - Short Time 43, 315
  - Trade with India 430
  - Yarn Production 87, 305
- Joint Cotton Committee 154, 159, 396
- Juvenile Employment:
  - England 472

PAGE
Kenya Colony ... 481
Korea:
  Cotton Growing ... 106

Labour Migration:
  America ... 502
Looms:
  Lancashire (see "England").
  Austria ... 4
  China ... 202
  England ... 458
  France ... 224
  Germany ... 479
  India ... 262
  Japan ... 87, 459, 467
  Poland ... 306
  U.S.A. ... 459
  Variation in efficiency ... 462

Machinery:
  England's Exports
    28, 184, 372, 477
  China ... 441
Manchester Cotton Association 446
Mesopotamia ... 485
Mexico:
  Cotton Consumption 45, 317, 345
  Cotton Mill Stocks ... 47, 319, 345
  Short Time ... 43, 315
Migration of Labour ... 502
Mill Cotton Consumption ... 44
Mill Cotton Stocks ... 46
Mill Production:
  Effect of 48-hour Working Week
    136
Mors, Oscar G. ... 204
Motor Cars in U.S.A. ... 310

New England ... 455
Nigeria ... 481
Norway:
  Cotton Consumption 44, 67, 339
  Cotton Mill Stocks 46, 67, 339
  Short Time ... 43
  State of Trade ... 17, 305
  Wages ... 17, 171
Nyasaland:
  Cotton Growing ... 108, 484

"Outside" Growths 210, 322, 385

Par Values ... 113, 413H
Paraguay:
  Cotton Growing ... 107
Peru:
  Cotton Growing ... 107
Poland:
  Cotton Consumption
    44, 61, 316, 333
  Cotton Mill Industry ... 219
  Cotton Mill Stocks
    46, 61, 318, 333
  Looms ... 306
  Short Time ... 43, 315
  Spindles ... 306
  Wages ... 18, 172, 306, 411

PAGE
Porto Rico:
  Cotton Growing ... 108
Portugal:
  Cotton Consumption
    44, 64, 316, 336
  Cotton Mill Stocks
    46, 64, 318, 336
  Short Time ... 43, 315
  Wages ... 18, 172, 306
Prices:
  Austria ... 4
  Belgium ... 8
  Czecho-Slovakia ... 164, 295
  Denmark ... 297
  England ... 24, 179, 181, 416
  France ... 169, 300
  Italy ... 171, 304

Reviews ... 284, 393, 520
Rhodesia:
  Cotton Growing ... 484
Rio Cotton Conference
  93, 190, 195, 206, 286
Russia:
  Cotton Consumption ... 44
  Cotton Growing in Turkestan
    109, 258
  Cotton Growing in Russian-Asia 513
  Cotton Mill Production 173, 211
  Cotton Mill Stocks ... 46
  State of Trade ... 413A

São Paulo Cotton ... 204
Seridó:
  Paper written by F. Jenny 198
Shares:
  English Textile ... 29, 185, 478
Short Time:
  Austria ... 288
  Denmark ... 296
  England ... 167, 315
  Spain ... 307
Short Time Statistics ... 43, 315
Shortage of Cotton ... 347
South Africa:
  Cotton Growing ... 484
Spain:
  Cotton Consumption
    44, 58, 316, 330
  Cotton Mill Stocks
    46, 58, 318, 330
  Short Time ... 43, 315
  Wages ... 19
Spindles:
  Austria ... 4
  China ... 81, 212
  France ... 224
  Germany ... 479
  Japan ... 467
  Poland ... 306
  U.S.A. ... 413
  World (each country given
    separately) ... 48, 320
Spinners' Takings ... 516

PAGE

- Standards of American Cotton 367, 402, 417
- State of Trade Reports:
  - Austria ... 4, 160, 287, 399
  - Belgium ... 8, 162, 290, 399
  - China ... 292
  - Czecho-Slovakia ... 8, 164, 399
  - Denmark ... 11, 166
  - England 21, 167, 168, 297, 347, 405, 414
  - Finland ... 13, 168, 413A
  - France ... 13, 169, 399
  - Germany ... 15, 170, 397
  - Holland ... 15, 170, 400
  - Italy ... 15, 171, 398
  - Poland ... 18, 172
  - Portugal ... 18, 172, 303, 413A
  - Russia ... 172, 413A
  - Sweden ... 18, 174, 308, 399
  - Switzerland ... 19, 174, 309, 399
- Statistics:
  - International Cotton Federation Figures ... 42, 259, 314, 516
- Stocks of Cotton Mills 46, 318
- Sudan Cotton ... 388
- Sukkur Barrage ... 496
- Supply and Distribution Statistics 510
- Sweden:
  - Cotton Consumption 44, 63, 316, 335
  - Cotton Mill Stocks 46, 63, 318, 335
  - Imports and Exports ... 174
  - Short Time ... 43, 315
  - Wages ... 18
- Switzerland:
  - Cotton Consumption 44, 60, 316, 332
  - Cotton Mill Stocks 46, 60, 318, 332
  - Historical Development of Cotton Industry ... 74
  - Short Time ... 43, 315
  - Wages ... 19
  - Working Hours ... 309, 413B

- Tanganyika ... 484
- Tilley, Sir John:
  - Speech at Rio ... 192
- Trade Unionism:
  - History in England ... 266
- Transport Matters:
  - England ... 278
- Tsingtao ... 442

- Uganda ... 484
- Unemployment:
  - Austria ... 400
  - England ... 347
- U.S.A.:
  - Automobiles ... 310
  - Cotton Consumption 45, 310, 343, 503
  - Cotton Mill Conditions, North and South ... 450

PAGE

- U.S.A.—*continued.*
  - Cotton Mill Stocks ... 47, 343
  - Exports of Cotton Goods 39, 382
  - Fall River Dividends 41, 377
  - Hours of Labour in Massachussetts ... 310, 452
  - Imports of Foreign Cotton 504
  - Legislation ... 452
  - State of Trade ... 412
  - Taxation ... 452
  - Wage Chart ... 379
  - Wages, North and South ... 222
- Visible Cotton Supply ... 52, 324
- Volkart's Report ... 33

- Wages:
  - Austria ... 5, 160, 287
  - Belgium ... 8
  - China ... 292
  - Czecho-Slovakia ... 8, 294
  - Denmark ... 10, 166, 296
  - England 11, 12, 187, 405, 470
  - Finland ... 13
  - France 13, 14, 169, 300, 413C
  - Germany ... 15, 170
  - Holland ... 15, 170, 302
  - India ... 375, 376
  - Italy ... 16
  - Japan ... 87, 468
  - Norway ... 17, 171
  - Poland ... 18, 172, 306, 411
  - Portugal ... 18, 172, 306, 413A
  - Spain ... 19
  - Sweden ... 18, 411
  - Switzerland ... 19, 175, 413B
  - U.S.A. ... 223, 378
- War:
  - Effect on French Cotton Industry 224
- Washington Cotton Standards Conference ... 417
- Waste in Cotton and Yarns ... 281
- Working Hours:
  - Belgium ... 403
  - Finland ... 413A
  - Holland ... 407
  - Italy ... 410
  - Poland ... 411
  - Portugal ... 413A
  - Russia ... 413A
  - Sweden ... 411
  - Switzerland ... 138, 413B
  - U.S.A. ... 412, 452
- World's Cotton Consumption 51, 265, 323, 351
- World's Cotton Mill Stocks 51, 323
- World's Cotton Production 91, 260, 265, 351, 352
- World's Cotton Supply and Distribution ... 352
- World's Prices of Cotton Goods 422

- Yields per Acre:
  - America ... 260, 413H
  - Egypt ... 263

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Textile Weekly	622
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Universal Winding Co.	717
Weld & Co.	669
Wilson Bros. Bobbin Co., Ltd.	767
Worrall, John, Ltd.	742

CONTENTS

VOL XI, No 44.

PAGE

OFFICIAL REPORT OF THE SIXTEENTH INTERNATIONAL COTTON CONGRESS, HELD IN PRAGUE AND CARLSBAD 431–611

Inaugural Reception, 432; First Session of the Congress—American Cotton Section, 441, Egyptian Section, 447; Second Day's Proceedings (Morning), 461; (Afternoon), 486; Concluding Session, 501; Resolutions, 509; List of Delegates, 515; Causes of the Depression in the World's Cotton Industry and Means to Overcome Them, by Otto Bankwitz, 524; Principles which should Form the Basis for the Establishment of a Quota Allotment in the Cotton Industry of Every Country, by Otto Bankwitz, 554; Trade Restrictions, by W. H. Catterall, 563; Effects of Futures Trading upon the Cotton and the Cotton Yarn Markets, by Dr. A. B. Cox, 577; Effects of Futures Trading in Cotton on the Raw Cotton and Cotton Goods Markets, by George R. Siedenburg, 581; The Effect of Futures Trading upon the Cotton and the Cotton Yarn Market, by Normal L. Cappel, 586; Terms of Payment and of Credits, 594; The Protection of Spinners from Financial Losses due to Failure of Cotton Exporters, by Gabr. Hofgaard, 604; The Effect of Futures Market on the Cotton Industry, by H. Westerschulte, 607.

STATE OF TRADE REPORTS 612–620

Austria, 612; Belgium, 613; China, 614; England, 615; France, 615; Germany, 616; Holland. 617; Italy, 618; Japan, 619; Portugal. 619; Spain, 619; Switzerland, 620.

COTTON GROWING 621–635

Algeria, 623; Argentina, 623; Australia, 623; Brazil,625; British West Indies, 625: Bulgaria, 625; Chosen, 626; French West Africa, 626; Haiti, 626; Mexico, 626; Peru, 626; St. Kitts-Nevis, 627; St. Vincent, 627; Sudan, 628; Uganda, 630; Union of South Africa, 630; U.S.S.R., 631; World Production and Acreage, 631; British Empire Cotton Growing, 633.

AMERICAN COTTON 636–659

U.S. Government Cotton Acreage Report, 637; Revised Estimates of the 1932 Cotton Crop, 638; Acreage Reduction by States, 639; Reduction in Yields from Stated Causes in 1932, 640; Revised Acreage and Yield Figures, 1866–1931, 641; Cotton Acreage Reduction Plan, 644; The Tare Situation and Fundamental Causes, 646; Russia to Buy American Cotton, 650; The Cotton Insect Situation, 650; Moisture in American Cotton, 651; Government Cotton Acreage Plan, 657; Crop and Market Reports, 658.

CONTENTS—*Continued.*

PAGE

EGYPTIAN COTTON 660–692

Joint Egyptian Cotton Committee, 660; Maarad Cotton, by Fouad Abaza Bey, 661; Note on Giza 7 and Sakha 4 Cottons, by Hussein Enan Bey, 666; Cotton Bagging in place of Jute for Egyptian Cotton Bales, by Arno S. Pearse, 671; The Development of the Rayon Industry, by R. A. de la Beaumelle, 675; Result of a Special Enquiry Regarding Egyptian Cotton, 685, Egyptian Cotton Statistics, Season 1932-1933, 689; Exports of Egyptian Cotton, 690; Egyptian Cotton Acreage, 690; New Crop, 691; Cotton Stocks in Alexandria, 692; Crop Reports, 692.

EAST INDIAN COTTON 693–699

India's Cotton Crop, 693; Furthering the Use of Indian Cotton in Lancashire, 694; Blow-room Treatment for a Long-Staple Cotton, 694, Spinning Test Results for Sudan Sakel, 696.

TECHNICAL SECTION 701–740

Determination of the Combing Value of Cotton Yarns, by Karl Küsebauch, 701; The Behaviour of Cottons of Parious Origins under Definite Swelling Processes, by Karl Küsebauch, 703; Research on Mercerisation and Steeping, by Dr. Karl Schwertassek, 706; Studies on the Dyeing of Cotton Fibre, by Wilhelm Sieber and Karl Küsebauch, 710; Fatigue or Hysteresis Phenomena in the Case of Tensile Stress on Cotton Yarns, by Karl Küsebauch, 712; Recent Improvements in Textile Machinery, by Frank Nasmith, 719; On the Determination of the Acid Content of Finished Cotton, by Dr. Karl Schwertassek and Josef Horatschke, 740.

COTTON MILL NOTES 741–757

The Cotton Industry of Czecho-Slovakia, 743; U.S. Cotton Textile Code, 745; Japanese Boycott of Indian Cotton, 750; Recent Developments in the Japanese Cotton Industry, 752; The Development of the Russian Textile Industry, 756; Plans to Assist Cotton and Silk Industries in China, 757; British India, 757.

MISCELLANEOUS 758–759

Textile Production in Foreign Countries, 758; Arrangements for Handling Cotton Futures in Spain, 759.

COTTON TRADE STATISTICS 760–763

Cotton Yarn Exported from the United Kingdom, 760; Cotton Manufactures Exported from the United Kingdom, 761; Imports of Foreign Cotton, U.S.A., 761; Egyptian Cotton Consumed in the United States, 762; Stocks of American Cotton at European Ports, 762; Exports of American Cotton, 763; Estimated Production of Rayon Yarn, 763.

REVIEWS ON CURRENT COTTON LITERATURE 764–766

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Inaugural Reception of the 16th International Cotton Congress, Prague, June 7th, 1933

INTERNATIONAL COTTON BULLETIN

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THE opening pages of the present issue contain the

OFFICIAL REPORT

OF THE

XVI International Cotton Congress

HELD IN PRAGUE AND CARLSBAD

last June As the shorthand notes had to be transcribed and submitted to the different speakers, a slight delay in the publication of this issue of the INTERNATIONAL COTTON BULLETIN has taken place

The Congress "Papers" have been printed in this Report in English, a supply of some of the French and German translations is available on application to the Head Office

REPORT OF THE PROCEEDINGS

OF THE

XVI International Cotton Congress.

INAUGURAL RECEPTION, JUNE 7th, 1933.

THE Inaugural Session of the delegates took place in the Main Hall of the Czecho-Slovakian Master Cotton Spinners' and Manufacturers' Association, Prague.

A large number of delegates attended, including ladies, and there were also present many members of the Diplomatic Corps and Czecho-Slovakian Government officials.

Mr. R. Morawetz (Czecho-Slovakia), the President of the Congress, occupied the main seat on the platform, and he was accompanied by Dr. Matousek, the Czecho-Slovakian Minister of Industry and Commerce, Mr. Paul Schlumberger (France), the President of the International Cotton Federation, His Excellency Ahmed Abdel Wahab Pacha (Egypt), the President of the Joint Egyptian Cotton Committee, Mr. Fred Mills (England), Senior Vice-President, Dr. Hendrik van Delden (Germany), Junior Vice-President, Dr. E. Zucker and Baron Liebig (Czecho-Slovakia).

Mr. MORAWETZ welcomed the delegates, first in the Czech language, then in French, English and German.

Speaking in Czech, Mr. MORAWETZ said:—

"It is indeed a great pleasure to me that I have the honour to welcome you on this occasion in the historical city of Prague. I appreciate the honour that ladies and gentlemen from practically all States which have a cotton industry have come here, and I extend to all present our heartiest thanks for the honour they have shown us by attending at this Congress.

Continuing in English, the speaker said:—

"We have invited you to this Congress in the midst of this unparalleled crisis, and it would be entirely out of place were we to offer you luxurious hospitality.

"But we can assure you that our offer comes from our innermost hearts, and I bid you a truly cordial welcome.

"I am sure you will agree with our proposal before starting work, to send a telegram to the President of our Republic, Professor Masaryk, thanking him for all the interest he has graciously shown in this Congress.

"You are meeting on this occasion for your discussions in the territory of a young State, a State whose industry is proportionately very big—far bigger than you might expect, having regard to the population. The textile industry is of special importance here, and as cotton is the principal branch, there is no doubt that your meetings will arouse the utmost interest among our public.

"If there is anything that might diminish our sincere pleasure at your presence, and at the fact that such a great number of representatives of all countries have come to this city, it is the fact that we are meeting at a moment when the whole world is suffering from a terrible economic crisis. There is no State, and consequently no member of this assembly, unaffected by this situation.

"But the very fact that all mankind are equally suffering from the difficulties alluded to, proves that there is no cure for the disease that could be applied locally or individually.

"We are, it seems to me, facing brighter times; in every country of the world real arduous efforts are being made to improve the situation.

"We have all watched with interest the extraordinary measures applied in U.S.A., and we have every reason to believe that the forthcoming World's Economic Conference will be a success.

"Perhaps our International Cotton Congress may be of some slight use to the men who will gather in a few days in London.

Mr. Morawetz continued, in French:—

" Espérons que les rudes épreuves que la crise économique mondiale a imposé a l'humanité mènent à la connaissance que les tentatives de réparations elles aussi doivent être universelles."

" Les terribles expériences des derniers temps ont été une dure leçon et nous montrent que toute idée est vaine qui espère que l'isolement de certains états puissent retrouver des conditions normales tout en laissant périr d'autres."

Addressing the German delegates in that language, he stated:

" Durch einen merkwürdigen Zufall tritt der heurige Kongress am Vorabend der Weltwirtschaftskonferenz zusammen. Die ganze Welt wendet ihre Blicke erwartungsvoll zu diesen grossen Beratungen der Vertreter aller Staaten in der Hoffnung, dass diese Konferenz berufen sein wird, die Grundlagen zur wirtschaftlichen Verständigung der Nationen zu legen und damit die Rückkehr zu normalen Verhältnissen anzubahnen.

" Ich glaube, im Sinne aller Anwesenden zu sprechen, wenn ich der Erwartung Ausdruck verleihe, dass die in diese Konferenz gesetzten Hoffnungen im vollen Masse erfüllt werden.

" Wir hoffen zuversichtlich, dass die Verhandlungen unseres Kongresses von Erfolg gekrönt sein werden und ich wünsche Ihnen zu Ihren Beratungen den besten Erfolg.

Speaking in Czech, Dr. Matousek, Minister of Commerce and Industry, addressed the delegates. He said:—

"As Minister of Industry and Commerce of the Czechoslovak Republic, I have been honoured with the pleasant task to extend greetings of welcome to the delegates of the XVI International Cotton Congress in Prague and Carlsbad, and to its guests. Our cotton trade is one of the largest branches of our industry. It gives employment to some 200,000 persons. Unfortunately, the

present economic crisis strikes this industry to a much greater extent than is the case in other States, because the largest part of its production is dependent on the export trade."

Speaking in French, Dr. Matousek continued:—

"Du reste l'industrie du coton a dû subir cette crise dans le monde entier. Nous avons vu les divers Etats fermer leurs portes au moyen de hautes barrières douanières et de diverses mesures sur le commerce des devises, ce qui entrave les importations, quand elles n'en sont pas complètement arrêtées. Mais en fin de compte nous sommes contraints d'arriver à reconnaître qu'aujourd'hui plus que jamais, les Etats dépendent les uns des autres et que c'est par un effort commun qu'il sera possible de surmonter une crise qui n'a pas d'exemples dans l'histoire. Nous espérons que la solution des problèmes économiques qui se posent sera facilitée par la prochaine Conférence économique de Londres, qui veut se laisser guider par le désir d'examiner et de fixer les conditions pour améliorer la grave situation économique dont tout le monde a souffert. Récemment la Petite Entente s'est réunie à Prague; ses délibérations visaient également à ajuster, aussi au point de vue économique, les rapports entre les Etats de l'Europe Centrale, notamment entre les membres de la Petite Entente. En facilitant les échanges internationaux de marchandises, on améliore aussi la situation monétaire, on fait renaître la confiance entre les peuples et les Etats.

"Czecho-Slovakia was and is always ready to attempt the solution of these problems, all the more so because hundreds of thousands of Czechoslovak citizens depend on the prosperity of the industry. It is only to be hoped, in the first instance, that the representatives of the industry should between themselves help in the solution of economical problems, and I trust that your Congress will work to this end."

Dr. Matousek concluded in French:—

"J'apprecie fort l'intérêt que vous avez manifesté en organisant justement votre assemblée dans la capitale de notre Etat. Je vous souhaite à tous la bienvenue et exprime le voeu que vos délibérations, de même que nos relations réciproques, aboutissent à un plein succès."

MR. P. SCHLUMBERGER'S SPEECH

Mr. PAUL SCHLUMBERGER, President of the International Cotton Federation, addressed the Congress as follows:—

La Fédération Internationale des Associations des Maîtres Filateurs et Tisseurs est extrêmement sensible a l'honneur que vous lui avez témoigné en l'invitant à tenir dans votre belle cité de Prague les assises de son Congrès de 1933.

Les circonstances exceptionellement difficiles que traverse aujourd'hui le monde entier, nous font apprécier encore plus d'être réunis dans votre ville admirable, dont le charme séculaire, les beautés naturelles, les trésors d'arts, seront un complément magnifique a nos travaux.

En vous exprimant, M. le Dr. Matousek, Ministre du Commerce et de l'Industrie, la joie que nous éprouvons d'avoir pu accepter l'hospitalité qui nous a été offerte, permettez-moi de rendre

hommage a votre Gouvernement et de vous remercier d'assister en son nom a notre Congrès. Je vous prierais de transmettre a M. le Président Masaryk, qui a bien voulu reçevoir amiablement les présidents et vice-présidents du Congrès, l'hommage de notre profond respect.

Votre présence est le témoignage de l'intérêt que vous portez aux questions économiques, dans le cas spécial a l'industrie textile durement touchée par la crise mondiale.

J'adresse au Président de notre Congrès, M. Morawetz, l'éxpression de notre reconnaissance d'avoir bien voulu assumer la présidence de nos travaux et je suis certain que sa tâche si fatigante qu'elle est, ne sera point difficile. L'entente qui regne parmi les membres de notre Fédération, lui facilitera son travail.

Speaking in English, Mr. SCHLUMBERGER continued:—

It is now my duty, as President of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, to give you a brief review of the work undertaken by your Committee since the French Association had the pleasure of welcoming you in Paris two years ago.

At that time the general situation in the cotton textile industry was very unsatisfactory everywhere, and I am sorry to say that the position has not improved since. Being cotton industrialists, we have naturally been unable to create any alteration in the currency questions of the various nations, and the consequences of the events in the realms of monetary manipulations of the past years have weighed heavily upon the cotton industry. The reduced exchange of goods between the various countries and the trade restrictions introduced in so many different ways have caused a decrease in the consumption of cotton goods in practically every country of the world. Restrictions have been set up everywhere, chiefly in attempts to defend the industrial life of the different countries.

These steps were taken as the only natural means of protection which the human race could apply to stop the disequilibrium between the loss of supply and demand. Furthermore, it should be remembered that the world's production of raw cotton has been favoured by the caprices of nature, with the result that Providence has given us very heavy and good quality crops, when actually less raw material was needed.

And so we have come to our present situation step by step, and the same conditions apply to practically every industry all over the world.

The continued crisis, however, is causing the business men of the world great exasperation, and our Federation has considered practically every method which could help the world out of the threatened danger. I leave you to judge for yourselves in this respect, in the review of the work of the International Cotton Federation which I propose to give you.

I shall only deal with the more important subjects, for the Committee of this organization has been exceptionally active during the last two years—two years which have indeed been exceedingly trying to all industrialists—and, in looking back, it appears to me that, each succeeding year, the work has become more arduous. Nevertheless, the work must be accomplished, and it is very encouraging to find such hearty co-operation among the members of the Committee in our endeavour to achieve our objects. What is more inspiring still is the fact that this organization is considered an example to the other great industrial associations. We have with us to-day the President of the International Wool Textile Organization, and we hope that that body and our own will work in unanimity when confronted by problems affecting our great industries. International co-operation is now even more necessary than in the past—nations have greater facilities for more rapid communication than ever before by means of the aeroplane, wireless telegraphy and the inter-continental telephone, and our older methods of communication and transportation are being speeded up to meet the competition of their new rivals. Furthermore, nations are now so interdependent upon one another that it can be stated with truth that when one nation suffers all the other nations are ultimately affected, either directly or indirectly. This is indeed a point which needs bringing home to our politicians.

One of our first duties is to remember with sympathy those who have died during the intervening time since our last Congress. First and foremost, I wish to mention the name of Mr. William Howarth, who was elected President of your organization on the retirement of Count Jean de Hemptinne in February, 1932. Mr. Howarth had only been in office just over two months when he was stricken with a long and lingering disease, against which he fought most bravely for over ten months. His spirit during those dreadful months was remarkable, and at one time both he and we had every hope that he would be addressing us here to-day. But, as you know, it was decreed otherwise, and Mr. Howarth passed peacefully away in January last. In him we have lost a staunch and loyal friend and an able leader—one whom it is difficult to replace.

Our Committee has also sustained further losses by the death of Mr. A. E. Hakanson, representative of Sweden, Mr. H. P. Taveira, member for Portugal, and who was on the original Committee at the inauguration of the International Federation, and Mr. John Smethurst, who was the first Secretary of the International Federation—and afterwards represented England on the Committee. Other names of well-known gentlemen in the cotton world who have died since our last Congress are the Duke of Abruzzi, who undertook such wonderful pioneer work in the sphere of cotton-growing in the Italian Colonies; Monsieur René Laederich, who was the President of the last Congress in Paris and President of the French Association; Mr. H. Roberts and Mr. F. Arrowsmith, both prominent members of the English Federation. Ladies and gentlemen, I ask you to rise in reverence to acknowledge in this way the services they have rendered to us, and to show our sympathy to their relatives who still remain among us. . . . . . .

The first event of importance to take place after our last Congress was the meeting in Wiesbaden in October, 1931. To this meeting were invited members of the Cotton Propaganda Sub-Committee, which had been set up as a result of the resolution adopted in Paris. Eventually the Sub-Committee met members of the fashion houses in Paris. These representatives undertook to co-operate with cotton manufacturers with regard to the extended use of cotton goods for the making-up of fashions. From our conversations it appeared that there was a keen desire on their part to keep in close touch with the industry and to further the use of cotton materials. Several important cotton firms have now established offices in Paris, and I feel sure that the increased use of cotton goods for ladies' fashions has been due in no small measure to our efforts in this direction.

You will remember that we passed a resolution requesting the former American Federal Farm Board to issue a statement as to their sales policy, and at the same time recommending them to sell a certain quantity of their raw cotton stock each week. The Board eventually issued a statement as to their policy, but could not see their way to adopt regulated weekly sales. This question of weekly sales has been taken up again recently with the present Minister of Agriculture, and we hope that this method of disposing of their stock of cotton has been included in the new Farm Bill recently passed into law.

In accordance with your request, we have studied the question of moisture in American cotton. Tests have been taken by many affiliated countries, and as a result of the first tabulation of results it was found that the average moisture content of all cotton tested was comparatively high. The results of later tests will be submitted to you during this Congress, when you will have the opportunity of further discussing this subject.

A Sub-Committee was formed to formulate a standardized system of testing cotton bales for moisture; this was done, and the result of its findings was sent to every testing-house in Europe and Asia, urging the adoption of this system.

While dealing with the subject of American cotton I may say that at our London meeting we adopted a resolution calling upon all the cotton exchanges to establish a net-weight contract for bales covered with cotton instead of jute, as we felt that the non-existence of a net-weight contract prevented the adoption of a cotton covering, which, from a spinner's point of view, is a very desirable improvement in baling. I am sorry to say, however, that American shippers appear to be very reluctant to adopt a net-weight contract, but I have hopes that something more may be done in this direction.

We have also sent two resolutions to the United States Department of Agriculture, asking that body to do its utmost to prevent false packing. As you know, this question has been very troublesome during the last few years. We feel that it is very difficult for a spinner to trace an offending ginner in this respect, and we have therefore asked the Department to institute a system similar to that adopted in India, whereby all the bales ginned by a certain ginner will bear an indelible number on the hoops or bands. We should then be able to trace the offender, and action could be taken against him, either by the United States Government, as false packing is a serious criminal offence, or by the shipper. So far no reply has been received to our resolution, as sufficient time has not yet elapsed; we know, however, that this matter is receiving serious consideration.

The all-important question of the crisis in the cotton industry has ever occupied the attention of your Committee during the past two years. In this respect I may say that MM. Brasseur, Zucker, Mylius and de la Beaumelle have been very active and have made a special study of the subject.

A paper of outstanding merit on this subject has been contributed to this Congress by Mr. Bankwitz, which I am sure will be of great value in our discussions.

A Sub-Committee to deal with the vexed question of tariffs, trade and currency restrictions has been set up and a resolution arrived at by that body has been sent to our Governments. This resolution calls upon the Governments of the various countries of the world to cease the tariff war which at present exists, and states as our opinion that the question of war debts must be settled before international trade can be expected to assume normal proportions. We sincerely hope and earnestly pray that, when the Government representatives of the different nations foregather in London next week, they will arrive at some satisfactory results to the benefit of all mankind, for I am convinced that, unless that Conference is a success, it is very doubtful when improved conditions for industry and international trade will return.

At our last meeting, in March, we endeavoured to take action ourselves in improving conditions in the cotton trade. In the first instance, we realized that production should equal demand, and as a first step towards obtaining this desirable situation we recommended the affiliated Associations to curtail production by one week during the month of April. The proposal met with some measure of success, as it was found that all countries were working approximately 25 per cent. of short time, either organized or voluntarily. If this curtailment could be organized upon an international basis it would be a magnificent gesture on our part and show our strength and unity to the world, with obvious beneficial results to our members.

The International Labour Office in Geneva has desired to introduce a forty-hour working week, and I may say that your Committee were strongly unanimous in their opinion that this question is of no value at all in improving conditions; in fact we believe conditions would be worse under a 40-hour week, as so many countries have still to conform to the 48-hour week, and bearing in mind the increased cost of production which would naturally result from such a reduction in output, we passed a resolution strongly opposing this measure.

The papers presented to this Congress, while not so numerous as on the last occasion, should lead to interesting and profitable discussion, in which I hope you will all take a part. It is only by the free exchange of ideas and different viewpoints freely given that our common difficulties may be overcome. Let us take advantage of this opportunity to strengthen our position, and make this Congress in this historical city of Prague memorable in our annals. Let us bear in mind that the success of any Congress depends on the individual efforts of the delegates.

Te t l Z t

Immediately prior to the opening of the Prague Congress the Chief Officials of the International Cotton Federation together with the President of the Congress were received by the President of the Czecho Slovak Republic Professor Masaryk at his summer residence at Castle Lany The photograph shows from left to right Dr Hendrik van Delden Germany) Vice President International Cotton Federation Mr Fred Mills J P (England Vice President International Cotton Federation Mr Richard Morawetz (Czecho Slovakia) President of the Congress President Professor Masaryk His Excellency Ahmed Abdel Wahab Pacha (Egypt) President Joint Egyptian Cotton Committee Mr Paul Schlumberger (France) President International Cotton Federation

The period through which we are passing is undoubtedly fraught with much difficulty and uncertainty, but let us remember that the darkest hour is before the dawn. Let us go forward with the renewed hope that this Congress, together with the important World Conferences which are shortly to take place, may bring in their train Peace and Goodwill among the nations and improved trade and prosperity not only to the cotton industry but to the commerce of the entire world.

His Excellency AHMED ABDEL WAHAB PACHA next addressed the Congress. He said that it was his delightful task, as President of the Joint Egyptian Cotton Committee, on behalf of the Joint Egyptian Cotton Committee, to express their profound respect and their deep gratitude to His Excellency the President of the Republic of Czecho-Slovakia for the kind reception the previous day. A debt of thanks was also due to the President and members of the Czecho-Slovakian Textile Manufacturers' Association for being so kind as to invite the Joint Egyptian Cotton Committee to hold its annual meeting for 1933 in the magnificent city of Prague.

" Those amongst you who took part in the Fifteenth Congress, held in Paris two years ago, might remember that, addressing the members then present at the inaugural meeting, I said : ' It is most unfortunate that cotton is passing through a crisis perhaps much severer than has ever been known before. Production is no less unfortunate than the industry, so much so that we producers of cotton in Egypt are wondering very seriously whether it pays us to cultivate cotton at all,' " said His Excellency.

"The situation to-day is as bad, if not worse, than it was two years ago. We are still ' suffering the slings and arrows of outrageous fortune,' and if in 1931 there was little left of the savings from years of prosperity, there is decidedly nothing left in 1933. If in 1931 we did wonder whether it paid us to cultivate cotton, we are now full of conviction that under present world conditions it cannot pay. Worse still, Mr. Chairman and gentlemen, we have come to the conclusion, after a couple of years' experience, that it is just as hopeless to attempt growing other products with any prospect of success, so long as the world is continuing to suffer from the crisis of general plenty that has led to general impoverishment. So long as the world continues with its unstable currencies, with its fickle credit, with its high tariff walls, its quotas, its exchange restrictions, and its molested trade relations, our expectation of a recovery will continue to be baffled.

" There is, however, one ray of hope. The world's statesmen and economists have begun to realize that the various problems of this general crisis can only be solved by international action. Hence the happy idea of the International Economic and Monetary Conference to be held in London in a few days' time. Upon the issues of this unprecedented gathering of the representatives of sixty-six States depends the fate of the world at this rugged and awful juncture. We representatives of the cotton world, producers, exporters, merchants, spinners and manufacturers alike, while awaiting the outcome of the Conference, have no justification to lose patience. The very ray of hope that has peeped in through the intensity of darkness has inspired us with a feeling of optimism.

"We believe, and rightly so, that the worst times are over, as the world cannot by any means support the existing state of affairs any longer. Thanks to this ray, as yet feeble, we are feeling our way through the darkness, and we cannot help thinking that we are bound to advance towards light, dim though it may be at the beginning, yet it is sure to get clearer and clearer until the time comes when this darkness sinks into oblivion and is no more.

"Goodwill on the part of the world's great leaders, and patience on the part of the peoples they lead—that is all which is required at the present moment.

"Meanwhile we of the cotton trade, besides supporting our share in the world's difficulties, have been having our minor troubles—minor perhaps as far as the whole world is concerned, but vital to the life of our trade. We have met twice during the world crisis: we met in Paris two years ago, and are now meeting in this beautiful city of Prague. Whether there is prosperity or depression, these questions have to be tackled in the interests of the cotton world. The results we ought to obtain from discussions will help to surmount the difficulties the trade has been encountering. That is why we attach most importance to the discussions that are taking place here to-day.

"I need not dwell too much on the importance of some of the subjects on the agenda. There are questions of a particular character relating to certain growths of cotton, and these will be dealt with in the sectional meetings of American and Egyptian cottons. But there are the questions of a general nature that interest us all—such questions as the causes of the depression in the world's cotton industry—international curtailment of yarn production, the effect of futures trading upon the cotton and cotton yarn markets, and the like. These can only be dealt with by competent authorities and specialists such as are assembled here at present. The views to be expressed and the suggestions made, which are the result of years of experience and of technical knowledge, must go a long way towards solving the present difficulties of the trade."

In conclusion, His Excellency hoped that the efforts of those working for the common good would meet with success, and before closing his speech he stated that he would like to reiterate their appreciation of the kindness and hospitality shown them since their arrival in Czecho-Slovakia.

Mr. SCHLUMBERGER: This terminates the Inaugural Meeting of the International Cotton Congress. The business sections will start work this afternoon at 2-30 p.m. in this building. It only remains for me to express the hope that really practical work will be the outcome of the meetings.

This closed the business of the Inaugural Meeting of the Congress.

FIRST SESSION OF THE CONGRESS.

Sectional Meeting No. 1—AMERICAN COTTON SECTION.

Dr ERNEST ZUCKER (Czecho-Slovakia), the Chairman, in opening the Session, said —

"Two years ago, when we were gathered together in our Paris International Congress, a wave of confidence created by President Hoover's action permeated the world, but unfortunately it soon died out

After that, conditions became much worse, however, just now, the United States of America have again inspired the world with a ray of hope, an improvement has set in, which we all sincerely hope will be lasting

"The efforts to overcome the crisis always aimed at increasing the consumption by means of political-economic measures, by subsidies, etc

'It s very questionable whether success lies in that direction, for we must realize that by excluding China and Russia about one-third of humanity, or 600,000,000 people, have been cut off from the normal commercial relations and we miss their demand as consumers On the other hand, it seems that in consequence of the huge investments and reparations during the first years after the war, the development that took place had overstepped its pace by many years in advance, so that progress of commerce and industry cannot take place because it is dependent on investments

' The two main symptoms and contemporary causes of the crisis are Unemployment and the Currency Crisis Allow me to add to these two points some entirely personal observations, as I am of opinion that we should not approach the various problems of the cotton industry in our first business meeting without referring to these two primary causes that have upset our industry in which so many operatives are engaged and which in the purchase of its raw material and in the export of the manufactured articles, has to calculate on the dollar or the £ sterling

"I do not know whether we shall be able to raise substantially the cotton consumption It is however certain that low-priced cotton alone cannot achieve the object Perhaps it will become necessary to consider the present quantity of labour and the present wages as a given factor and it remains for us to try to find within these figures employment for more people

"It is an injustice that those really willing to work cannot find employment, consequently we shall have to distribute the available work amongst those willing to work

"Work is of two-fold value Firstly it creates values and supplies wages, but it has the other great value that it gives life a moral advantage, a man who has regular work feels within himself that life has a purpose for him, whilst the workless man regards himself as of no value and sees no future in front of himself He who cannot find work is discontented with the world, and very naturally comes to the conclusion that a society which cannot provide him with work is built up on unjust and unfair lines and requires to be reformed.

"If one considers the problem of unemployment from this point of view, the solution will become easier and the available quantity of work and the available wages will be distributed amongst more people.

"Because the question of unemployment differs in the various countries, the solution will have to be reached in different ways in each country, yet it may be based on international principles.

"At the time of the Paris Congress in 1931 the two main currencies of the world, dollar and pound sterling, were still solid currencies. Since the autumn of 1931 the pound sterling has given way, and in April of 1933 the dollar followed suit.

"Until these two currencies again become stabilized we shall not reach the status quo of 1931. I do not maintain that we ought to desire to see the dollar and the pound sterling once more on their former gold basis; personally I have had for a long time the conviction that both dollar and pound had to be devaluated and I put my views on this matter forward some time ago in a booklet.

"Please bear in mind that devaluation and non-stability are two entirely different things. When the internal indebtedness of a country demands too high a level of wages, frozen bank credits, too much private indebtedness, and a reduction of the gold value, this devaluation can take place, and then the currency can be kept stable on the new basis.

"I can very well imagine that the dollar will slip much below the present figure, but this level will be fixed by law, and that the pound sterling will be stabilized at 3.50 or 4 dollars.

"What we desire in the interests of our industry is that a stabilization of these two currencies should take place, at what level is immaterial. As long as we have a known gauge by means of which we can calculate, we shall have laid once more the foundation for the economics of the world.

"I express the hope that this stabilization will take place very soon, and that our industry will engage itself with the problem of how to find more employment for many millions more people than heretofore and contribute in this way to the solution of the formidable problem of unemployment."

MOISTURE IN AMERICAN COTTON.

Mr. NORMAN S. PEARSE, the General Secretary, gave a synopsis of his Congress Paper on "Moisture in American Cotton," which subject was the first on the agenda for discussion. (*The paper will be found elsewhere in this copy of* THE INTERNATIONAL COTTON BULLETIN.)

Mr. Pearse pointed out that the International Committee had considered the results of the tests in 1932 in London, and it was found that the average moisture content of the first series of tests amounted to 9.21 per cent., whereas the recognized standard was 8.5 per cent. Several shippers, however, had succeeded in registering less than 8.5 per cent., which proved that it was possible to ship the cotton dry, that is to say, with not more than 8.5 per cent. of moisture.

Mr. Pearse mentioned that the French spinners had a testing-house at Havre even before 1914. Out of some 500,000 bales tested between 1923 and 1931 there was proved to have been three years of gain and five years of loss to spinners. He had worked out that the net loss to the spinners of the world on the basis of these French tests was in the region of £2,160,000. This was equal to a loss of .478 pence per spindle, which he submitted was a very serious matter for the spinners. Calculations showed in the latest series of tests that out of sixty-two shippers, seventeen American exporters had an average less than 8.5 per cent., but only three European shippers had shipped cotton as dry as this. The speaker drew special attention to the fact that the average moisture content of shipments from European merchants was as high as 9.069 per cent., from which it would appear that the cotton had absorbed moisture either during the passage across the Atlantic, or whilst in storage in Europe.

One case particularly noted by the speaker was a bale of cotton which gained 20 lbs. weight in three days during a rainy period in Manchester.

He also pointed out that various American cottons grown in different districts of the belt showed different standards of wetness and of dryness. The wettest came from Oklahoma and Arkansas.

The International Committee, at its meeting in October last, passed the following resolution:—

> "Eight and a half per cent. to be standard regain for c.i.f. American cotton, with a tolerance of 0.5 per cent. down. If the cotton contains less than 8 per cent. of moisture the spinner shall pay the difference to the seller up to 8 per cent. If the moisture content be more than 8.5 per cent. the seller shall pay for the excess above 8.5 per cent."

In view of the susceptibility of cotton taking up moisture from the atmosphere, even during a very short period, he thought it would be necessary for the samples that are to be used by the experts of the cotton exchanges in their moisture assessment to be placed in air-tight tins, immediately when the samples are drawn from the bales. It was, of course, unfortunate that the cotton exchanges, as far as he knew, still refused to accept the verdict of a scientific test.

Although the representatives of the cotton exchanges present were asked to give their opinion on this matter, none responded.

Dr. **Zucker**, the Chairman, said that the Czecho-Slovakian spinners were of the opinion that cotton moisture could be standardized at 8.5 per cent. The English spinners evidently did not share this opinion. It was clear, however, that the question must be unanimously settled before the shippers could be approached. A solution might perhaps be reached in a similar fashion to the way in which the Egyptian cotton shippers and spinners settled their similar difficulties. "Please," continued Dr. Zucker, "tell us what you think and what you desire. It is understood, of course, that any speaker is only giving his personal opinion, and that he does not in any way bind his association."

Mr. **FRED MILLS** (England) asserted that the English Federation of Master Cotton Spinners' Associations could not recognize the Lugano resolution, but as they were interested in the matter, they had asked for tests in twenty mills in different parts of Lancashire, these tests to be made during a period of about twelve months. He said that Dr. Pickard, of the British Cotton Industry Research Association, would later explain the plan. The majority of English spinners, continued Mr. Mills, were opposed to a moisture standard altogether, and could not agree that the present system of making tests was really sufficiently reliable.

Dr. **PICKARD** (England) explained that the English Master Cotton Spinners' Federation had arranged that tests should be made in about twenty mills over a period of twelve months. It was necessary, too, in the view of the English Federation, to bring light to bear on the question of seasonal changes on cotton. These, said Dr. Pickard, could be of two kinds:—

(1) Seasonal changes at the time of picking.

(2) Seasonal changes at the time of opening.

He regretted that the tests had not yet been completed, as they had only been engaged on the matter for about four months. He welcomed the remarks of Mr. Norman Pearse, to the effect that there was little knowledge upon the behaviour of cotton whilst in the bales. It was well-known that loose cotton became drier or wetter according to atmospheric conditions in a different way from cotton in the bale form. Hence he welcomed the Italian invention for drawing samples in a rapid manner from the centre of the bale The only objection to their method was that the instrument, similar in principle to a cheese sampler, was rather cumbrous. It took out a core of cotton equal to 1½ ins. to 1¾ ins. in diameter and about 1 ft. deep, thereby permitting the determination of the moisture content at different layers. The Italian tests showed that there was a gradient of moisture, which seemed to indicate whether the cotton had been packed damp or not. This apparatus had proved its value for experimental (exploratory) work.

The English experimenters were trying out a smaller apparatus with a bore of ¾ in., which enabled tests to be carried out without undue handling of the bales. The results were identical with those of sampling, but boring took only ten seconds, whereas the hand sampling method took two men from half to three-quarters of an hour. The advantage of the apparatus was that it made it possible to see whether the moisture content was higher at the centre than at the sides of the bale, in which case it was wet when packed. If the reverse was the case, there was proof that moisture had been taken up during transit. There was need, concluded Dr. Pickard, for further study of the subject. He added that the next Congress would very probably hear a good deal more about the whole subject.

Dr. **ZUCKER**, the Chairman, expressed the thanks of the Meeting to Dr. Pickard for his statement, and agreed that more would be known about the subject by the time the next Congress was held

Dr SIEBER, of the Liberec (Reichenberg) Testing House, considered that all instruments should be of the same type, if any arrangement was to be reached in the matter

Dr MYLIUS (Italy) drew the attention of the Congress to the percentage of human error possible under the ordinary method Humidity, he said, must be calculated according to the dry weight He wished to stress that the Italian machine had been greatly improved although he had no intention or desire of boosting it

The Chairman here commented that nowhere had the subject been so closely studied as in Italy, and before the discussion ended the Congress agreed with the Chairman that the International Committee should carry out further investigations on the subject with a view to discussing the matter further at the next Congress

This ended the discussion on Moisture in American Cotton

The next subject was the Net Weight Cotton Contract

The General Secretary, Mr N S PEARSE, stated that this question had cropped up two years ago when a cotton covering for cotton bales was being extensively put on the market by American ginners The chief drawback to the wholesale adoption of a cotton covering was that it was of little practical use without the net weight contract The International Federation, realizing the advantage of a cotton covering to the spinner, decided to help the movement launched by the Americans by adopting a resolution in favour of the net weight cotton contract As far as he (Mr Pearse) knew, only Manchester, which was not strictly an exchange, agreed to the contract, although he believed that the Liverpool Cotton Association already had a net weight contract

The Chairman then asked for expressions of opinion and for the ideas of the Congress delegates upon this subject

Mr N S PEARSE added that the Committee had come to the conclusion on the previous day that it would perhaps be better to wait for the decisions of the U S Government before passing a resolution

Dr MYLIUS (Italy) pointed out that the Milan Cotton Exchange had already adopted the Net Weight Agreement The majority of spinners in Italy were quite satisfied Cotton covering had not yet been officially adopted, but it might yet come to pass

Kammerrat ERICH SPUTTER-LOETZEN (President of the Austrian Association) said that he regarded the Net Weight Contract as being very desirable, because it was easier for spinners to calculate on that basis The question was not whether one liked it or not but whether the spinners were going to succeed in getting the contract or not

The Chairman then asked whether anybody was against it

On receiving no reply to the contrary, he said he considered that as being sufficient for the Committee to act on

The Congress then dealt with the subject of Ginning and Baling

Mr N S **PEARSE**, the General Secretary, dealt with many points and finally stated that at the Brussels Meeting of the International Committee, the question of false packing received further consideration and as a result of the deliberations the following resolution was passed —

> "This Committee expresses its strongest disapproval at the growing practice of false packing of American cotton, largely originating from Texas, and particularly relating to staple
>
> "In order to enable spinners to trace offending parties, this Committee requests that the United States Department of Agriculture devise ways and means of identifying the ginneries from which such cotton has originated '

The affiliated associations were requested to send in reports stating where the false packings came from and whether they agreed with the Brussels resolution The matter had been pressed with the authorities in America but up to date no answer had been received to the Federation's representations Mr Pearse added, however, that he felt sure that the matter would eventually be attended to

Mr **FRED MILLS** (England) said that bales were often all right on the outside, but he and his fellow spinners in Lancashire had bad experiences They received bales with alternate layers of good and bad cotton, and these layers were from six to eight inches deep. Secondly, it created difficulty in the mixing room and thereby upset the work. Action should be taken to prevent the practice. There was no doubt that the false packing was wilfully done. It was a growing evil, continued Mr. Mills. Spinners had enough trouble without that, and he asked what was the Continental experience?

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* The expected reply from the U S Department of Agriculture has since come to hand and is given below

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS
WASHINGTON D C

June 3rd, 1933

Mr N S Pearse General Secretary
International Federation of Master Cotton
Spinners' & Manufacturers' Associations
Midland Bank House, 26 Cross Street
Manchester, 2

Dear Mr Pearse

This will acknowledge receipt of your letter of April 21 relative to the question of false packing of American cotton, and containing a resolution on the subject adopted by the International Cotton Committee at Brussels in March of this year

It is noted that in the second paragraph of this resolution the United States Department of Agriculture is requested to devise ways and means of identifying ginneries so as to enable spinners to trace the origin of false packed bales In this connection I wish to call your attention to the fact that the Bureau is without authority to take action to remedy the conditions of which complaint is made I will say, however, that a programme for American agriculture is now being formulated under the provisions of the agricultural relief legislation recently enacted It is as yet too early to say to what extent the authority granted in that legislation will be used or may be found appropriate for the accomplishment of these ends We are in contact with the Agricultural Adjustment Administration on these questions and hope to be able to discuss them more definitely in the near future

Very truly yours,

(Signed) ARTHUR W PALMER
(In charge, Division of Cotton Marketing)

Mr. F. HOLROYD (England) echoed every word that Mr Mills had said. He personally did not know about the Continental experience, but he did know about the English experience. He himself had already had too many falsely packed bales. He had to employ an extra man to separate the different layers of cotton.

Under the circumstances it was often impossible, declared Mr. Holroyd, to deliver yarn which was satisfactory to the manufacturers. The Congress should pass a strongly worded resolution so that the fault could be remedied. They would state to the Americans that the practice must stop. A strong resolution from the Congress would go a far longer way than individual complaints.

Mr. H. H. LAKIN (India) passed his remarks to Mr. BOYAGIS, who stated that two legislative measures had helped India. One was the Cotton Transport Act, which prohibited the transport of cotton from one zone to another, without licence. The second was the Cotton Press Act, which made it compulsory to give each press a number. Each bale was marked with a number and a letter showing the particular Province, the factory and the year in which the cotton came to the press. If these details were lacking, the bale would be rejected. This was all right for the East Indian Cotton Association, but he did not see how this could be applied to cotton for export. How could it be controlled? The only remedy would be to make an agreement with each Association.

The CHAIRMAN said that it was the opinion of the meeting, therefore, that a strong resolution should be drafted by the Committee, protesting against false packing.

Dr. MYLIUS (Italy) displayed to the delegates samples of the Italian core sampling in canisters, and great interest was evinced.

This concluded the business of the session.

Sectional Meeting No. 2.—EGYPTIAN SECTION.

His Excellency AHMED ABDEL WAHAB PACHA (Egypt), the President of the Joint Egyptian Cotton Committee, occupied the chair.

After welcoming the delegates the Chairman stated that the first item on the agenda was the question of

MOISTURE IN EGYPTIAN COTTON.

"I suppose you are quite aware," said His Excellency, "of the different steps through which this question of moisture has passed. In 1931 the International Cotton Congress, held in Paris, passed the following resolution:—

"It is hereby agreed that the degree of humidity which cotton should contain is 8.5 per cent. regain, with a tolerance of 0.4 per cent. up and down, i.e., that all humidity above 8.9 per cent. must be paid for by the exporter to the spinner, whilst if the cotton contains less than 8.1 per cent. of moisture the difference will be refunded by the spinner to the exporter. There is no allowance to be made by either party if the moisture in cotton is between 8.1 and 8.9 per cent.

" There will be established immediately in Alexandria a Testing House, which will be supervised by the Government, and the exporters and the spinners may appoint each a delegate. Parties will be free to arrange whether samples drawn for testing shall be taken in Alexandria or at the port of disembarkation or the mill, but in every case the samples will be drawn by an expert belonging to an official testing house and a certificate issued to buyer and seller of the result. Representatives of both parties shall have the right to be present when samples are taken.

" Weight should be taken at time of drawing samples under official supervision.

" This Agreement is valid for one year as from September 1, 1931."

"What happened afterwards," continued His Excellency, " was that an official Testing House was established in Alexandria. The Egyptian Government supplied the necessary funds for the starting of the Testing House, which was officially opened in July, 1932. A Board of Trustees has been elected consisting of:

(*a*) Two representatives of His Egyptian Majesty's Government, nominated by that Government.

(*b*) Two representatives of the Egyptian Cotton Exporters, nominated by their Association and approved by the Ministry of Agriculture.

(*c*) Two representatives of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, nominated by that Federation and approved by the Ministry of Agriculture.

" The President of the Board of Trustees is nominated by a Ministerial Arrêté emanating from the Ministry of Agriculture and based on the decision of the Council of Ministers.

" Dr. W. Lawrence Balls, the well-known cotton expert, who is present with us, has been elected the President of the Board of Trustees.

" The Trustees have full power of inspection at all times of the manner in which samples are taken and tests carried out.

"The Board of Trustees has nominated the firm of Messrs. Hewat, Bridson & Hargreaves as Managers and Secretaries of the Testing House.

"The arrangement between the Board of Trustees and the Managers is such that the Managers are entirely independent in the routine conduct of the Testing House, and have full responsibility for sampling and testing operations and for the issue and correctness of humidity certificates.

" The conditioning ovens and apparatus are of the best and latest types, and have been installed by a reputable firm of technical engineers.

" The existing installation is sufficient to deal with a much greater demand for humidity tests than that now being experienced, and arrangements have been made for a rapid extension in the event of the demand for tests becoming general.

" The manner of sampling and testing for humidity in Alexandria has been the subject of a great deal of research, and the system evolved and now in force is considered to be quite suitable to the special conditions obtaining in Egypt.

" In the early stages of the official existence of the Testing House the demand for tests was not extensive, but it is satisfactory to note that a number of clients, encouraged by the results obtained, are now regularly using this establishment.

" The demand for tests is steadily increasing, and up to the middle of March, 1933, the tests carried out totalled 194, mostly in connection with cotton shipments from Alexandria.

" The results obtained have been most satisfactory, disclosing a high degree of accuracy, and in no instance has a Testing House certificate been queried or rejected.

" There is no doubt that more use can be made by the spinners of the Alexandria Testing House. It is mainly a matter of confidence in its organization and a realization of the advantages to be gained by testing in Alexandria.

" It is particularly desirable to draw the attention of all spinners to the following points:—

(*a*) The Testing House is an independent establishment. Its competence and good functioning have been amply proved by the results obtained and the satisfaction expressed by its regular clients.

(*b*) The actual weights of cotton lots can be established in Alexandria at the same time the samples are drawn. Official certificates are issued to spinners and exporters, giving full details of the actual weights with the percentage of humidity and the mutual allowances for moisture. Spinners therefore receive an official document establishing the net invoice weight to be charged by exporters as calculated in Alexandria before shipment.

" Complete records of each process of sampling, testing, etc., are kept from the time instructions are received for testing until the final certificate is issued, and these are always available for reference.

(*c*) The cost of conditioning or testing in Alexandria compares favourably with the charges made by testing establishments elsewhere.

" It must not be overlooked that testing elsewhere than Alexandria necessitates the expense of the official of the Testing House travelling to the place where samples are drawn and tested.

" As weights of cotton lots are established in Alexandria at the time of testing, the controlling expenses for weights at the port of discharge could also be eliminated.

"It should also be remembered that the Testing House officials can draw samples at the press head before cotton is placed in the baling boxes, and there is nothing to prove that sampling in this way does not give satisfactory results. If this practice were generally adopted the expense of re-pressing in the case of sampling from steam-pressed bales would be saved.

> (*d*) The charges of the Alexandria Testing House are calculated to cover the expenses of operating only, and any surplus will be utilized in reducing these charges. Thus a more general use of the Alexandria Testing House by spinners will obviously result in a considerable reduction in the expense of testing.

"I think there is every reason to believe that the suggestion to establish a Testing House at Alexandria has been a great success, and we only hope that its use will be more and more in demand."

RENEWAL OF HUMIDITY AGREEMENT.

His Excellency went on to say that in the meeting held the previous day (Tuesday) it was decided by the Joint Egyptian Cotton Committee that the agreement concerning moisture content in Egyptian cotton should be extended for three years.

At the meeting held by the Joint Egyptian Cotton Committee in Windermere last July the following resolution was adopted:—

> "The Committee approved the extension of the agreement arrived at between exporters and spinners on the standard of moisture in Egyptian cotton for another year ending August 31, 1933."

"The managers of the Alexandria Testing House have been informed by certain exporters that since an agreement was reached between spinners and exporters on the question of humidity, a marked decrease has been experienced in the number of complaints received on the subject of moisture and it is most desirable that this improvement in relationship should be maintained.

"It is admitted that although demands for tests are not yet general, the existence of the Alexandria Testing House is of considerable utility to all concerned, affording to both spinners and exporters an official means of having tests made at the port of embarkation. Testing in Alexandria of cotton for shipment is generally desired by most of the shippers and the use of the Alexandria Testing House by spinners would undoubtedly dispel any fears or misgivings they may have in this respect, as they will soon realize that it is an entirely independent organization and that the official certificates issued are reliable. As soon as they are satisfied on these points there would seem to be no reason for tests being required elsewhere.

"It is to be hoped therefore that the Humidity Agreement will be renewed; it would be unfortunate if the measures undertaken to safeguard the interests of spinners and exporters were allowed to lapse and the progress made up to the present time nullified by subsequent lack of interest in the protection afforded by the Alexandria Testing House.

"It certainly provides a satisfactory solution to the problem of preventing or settling the disputes which may arise from time to time on questions of humidity.

"Dr. Balls, who is present here and who is the President of the Board of Trustees, will be able to give any information concerning the Testing House in Alexandria. I also will do my best to give you any information you may desire on the subject."

Dr. W. LAWRENCE BALLS (Egypt) gave an account of the first year's working of the Alexandria Testing House. The number of tests would have to be much larger than at present in order to make the Alexandria Testing House financially stable. At present the overhead costs were eating into the capital which His Egyptian Majesty's Government had provided for starting the work, although an exceptionally flexible and inexpensive arrangement had been made possible by the management. The possible output was well over one hundred tests per day.

However, it was likely that extensive use would shortly be made of the Alexandria Testing House for testing up-country cotton arriving in Alexandria, in place of "expertise"; this would make its financial future secure, and in any case the present arrangements would provide for three years to come. He was well satisfied with the accuracy of the results, which he had been able to check by using the Alexandria Testing House in the course of his own researches. Comparing the Alexandria records with those for bales tested in England over the same period (as circulated by the Secretary of the Federation) he found evidence for greater real usefulness in testing at Alexandria. The English figures showed a change from dryness in summer to dampness in winter which was not present in the bales when they left Alexandria. Also, the English tended to slightly higher moisture on the average than the Alexandria records made at the time of shipment. These differences were partly due to the climate of Manchester, and partly to an undesirable system of weighing out a fixed quantity of cotton for testing, which some of the English figures themselves revealed on examination.

He considered the Alexandria Testing House to be already useful to the cotton industry, with potentialities for much greater usefulness in the future.

Mr. T. DUTTON (England) said that, speaking as a spinner, the deliveries made direct to the mills were not as satisfactory as they used to be. There was more moisture in the cotton if it was bought on the spot at Liverpool than if it was purchased c.i.f. He added that he had figures to prove this.

With regard to the agreement for three years, the CHAIRMAN here remarked that the Alexandria Cotton Exporters' Association was willing to renew the agreement for one year.

Mr. W. H. CATTERALL (England) said that the idea was that the Testing House in Alexandria should be started for twelve months, and now the proposal was to renew the agreement for three years; if after this it was working satisfactorily, it would become a permanent Testing House for Egyptian cotton. He thought they were looking at the question largely from the growers' point of view as to what should be the moisture content in cotton.

He added that the Testing House at the Manchester Chamber of Commerce was able to carry out just as difficult tests as those carried out at Alexandria.

The Chairman agreed.

FOUAD ABAZA BEY (Egypt) referred to the very humid atmosphere of Manchester and expressed the opinion that all tests should be carried out at Alexandria, where conditions are ideal.

Mr. T. DUTTON said that in speaking again he would like to reply to the remarks about the climate of Manchester. "I know we have the stereotyped statement that cotton gains weight in Manchester, but it is a very remarkable fact that I have three shippers who ship to Manchester and I have never known them to ship cotton with excessive moisture. I have no cause to complain of my purchases of c.i.f. cotton, but when I buy spot cotton I have frequently cause to grumble. We ought to know the reason for this difference."

Mr. GEORGE CLAPPERTON (England) asked what did it matter if the cotton was sold on the landing weight? If they insisted on the landing weight, then any added moisture was a gain for the spinners. One of the things that had concerned him was that as soon as this moisture resolution was agreed to, he wondered whether shippers did not add a little more weight. Certainly they were now always right up to the proper moisture content, but this did not use to be the case. He hoped the delegates would take his remarks in the spirit in which they were made.

Dr. W. LAWRENCE BALLS (Egypt) replied that there had been practically no change for several years.

He said that there was still some confusion with regard to "cotton-content" of the bale. If this was certified on an 8½ per cent. basis, with shipping weights accordingly, any subsequent changes in the moisture-content, and consequently in the landing weights, were immaterial. He referred to what he described as the extraordinary case quoted by Mr. N. S. Pearse, the General Secretary of the Federation, of a bale which gained 20 lbs. weight in one day, but if a bale gained 20 lbs. or even 50 lbs. by standing about the docks in Manchester, it did not matter a bit, as the spinner was not being charged for it.

Mr. T. DUTTON: "I should like to ask a question as to why landing weights are always lighter than Alexandria weights by as much as many pounds per bale. To-day all landing weights in Manchester and Liverpool are lighter than Alexandria weights."

Dr. BALLS: "It is really the Alexandria exporter who should answer that question."

Dr. Balls, in reply to a request, then explained how, at the Alexandria Testing House, they measured damp by heating so that there was no scorching of the cotton during the tests.

Mr. H. KUPPER (Egypt) said it would be as well if they could get some tests that had been made during the past six months. He continued: "We, in the Alexandria Cotton Exporters' Association, have asked all shippers to collect figures about complaints received from spinners. We have had 102 tests carried out on a total number of 450,000 bales. The tests refer, therefore, only to a very small proportion of the whole amount shipped, but I can assure you that the shippers take care of the wishes of the spinners."

The CHAIRMAN said that it was desirable that the Alexandria Testing House should continue its work, and that the agreement between spinners and exporters should be arranged until September, 1936. "At the same time," continued His Excellency, "we should express the desire that the Alexandria shippers should pay the same attention to spot cotton as to cotton consigned to spinners in this respect. That is to say, it should be subject to the tests as well.

"Also, it was desirable to have the bales tested so that it would save the importer on the other side the trouble of going through the tests. There was no reason why he should not rely on the tests at Alexandria."

The Chairman then put the resolution as follows:—

> "That this Congress hereby renews the agreement relating to moisture in Egyptian cotton originally adopted at the 1931 Paris Congress; the renewal to remain in force without any change until September, 1936."

The resolution was agreed to, on the understanding that it would be put before the whole Congress to be voted upon on the last day.

NEW COTTON VARIETIES.

The CHAIRMAN said that two valuable papers had been prepared on Maarad and Giza 7 cotton by FOUAD ABAZA BEY and HUSSEIN ENAN BEY, members of the Joint Egyptian Cotton Committee, and they would like to hear any remarks from spinners regarding new varieties of cotton. The production of these two varieties—Maarad and Giza 7—had reached proportions deserving of the delegates' attention. The total crop of Maarad cotton rose from 320 cantars in 1923 to 275,000 cantars in 1932, and the yield for 1933 was estimated to be 400,000 cantars. The total production of Giza 7 in four years had gone up from 21,000 cantars in 1930 to 140,000 cantars in 1932, and the estimate for 1933 was 270,000 cantars.

The growers were out to supply the types of cotton which were most suitable to the requirements of spinners. "We should therefore be very pleased to hear any remarks that you have to make. Fouad Abaza Bey and Hussein Enan Bey will be able to reply concerning any questions relating to these new varieties, and Dr. Balls will also give you any information on any variety of cotton."

A delegate said, regarding Giza 7, that that type seemed to be improving. "Is there any probability of making a longer staple out of it?" he asked.

Dr. BALLS replied that spinners would have to take Giza 7 as they found it. "It won't change," added Dr. Balls. "We can give you another variety if you want"

HUSSEIN ENAN BEY said: "I would like to ask spinners whether it would be possible for spinners to order their cotton by the name accepted for each variety in Egypt instead of stipulating a type which might be composed of a mixture. By so doing spinners would be more likely to receive the varieties they ordered than if they asked for some number or fancy name of a certain type.

FOUAD ABAZA BEY raised the question of mixing, and said that it seemed possible for some exporters to mix the cotton and then give it any name. This, in fact, was being done daily. Maarad cotton was now stronger than previously; it is slightly shorter, and consequently they called it New Maarad.

Mr. W. HEAPS (England) said that with regard to new varieties of cotton which were not not readily sold, these should be disposed of in what spinners called "job lots."

Mr. Heaps then referred to the names of new varieties of cotton. He said that Sakel cotton acquired its name very early after its introduction to the trade. He did not think that Giza 7 did the same. Giza 7, as a name, did not sound as an appropriate commercial proposition which would get into popular use. How many spinners and manufacturers on the Manchester Exchange had heard of the variety Giza 7? Mr. Heaps commented, and expressed the view that names should be very carefully chosen for new varieties of cotton. It was very important to the spinner, and he would like the attention of the growers drawn to it. It was probable, of course, that the spinners were not in as close touch with the Agricultural Department as they might be. He suggested that Dr. Balls should put the spinners' views regarding these difficulties before the proper quarters.

An English delegate said that they had now got Maarad cotton to spin stronger than formerly, but he did not think it was quite equal to Sakel.

He emphasized that it was damaging the spinners' trade by using substituted cotton and labelling the cotton used as Sakel. He wished spinners could keep to one type and name, and thereby class their yarns according to the cotton used. It would save trouble and unnecessary complaints from manufacturers. If the manufacturers were buying Sakel yarns they must know that they were getting Sakel, and not a substitute for it. Let spinners therefore have the right cotton.

Dr. BALLS said he did not think there was any need to doubt that spinners sometimes got Sakel cotton mixed with other varieties, as evidenced by records to be seen at the Shirley Institute in Manchester, where the unquestionable Sakels provided by the State Domains and the Botanical Section could be seen at a glance to be markedly different from some of the commercial lots of the same name.

An Egyptian delegate said he was very surprised to hear about the complaint regarding mixing at Alexandria. He quite believed that there had been some mixing in Egyptian cotton, because sometimes there had been irregularities

The CHAIRMAN then proposed the following resolution

> ' This Congress is of opinion that, in the interests of the Egyptian section of the cotton spinning industry, it is essential that (with the exception of quantities of cotton required for the spinning of fine yarns, growers should produce the largest possible quantities of cotton of moderate length, with special regard to uniformity in length and strength of the fibre '

Mr W HEAPS (England), referring to the wording of the resolution, said "I asked the question yesterday 'What do we consider by fine spinners?' Could they take a fine spinner as a spinner of fine counts?" He suggested that the phrase "fine" spinners should really be "quality' spinners, and not "fine" spinners

Dr BALLS said that the point raised by Mr Heaps was a most important one, because there was a steady trend to increasing amounts of fine spinning being carried out in order to produce yarns which were "coarse" in count though "fine" in quality He agreed that ' quality spinner" was a better description than "fine spinner"

Mr R SEYRIG (France) expressed similar views

Mr BARBER LOMAX (England) said that they had big organizations in England that were not always spinning fine yarns It seemed to him that the difficulty would be overcome by inserting "fine-count spinning"

The CHAIRMAN said that, so far as he could make out, the definition was that fine spinning meant spinning fine counts and also superior qualities of yarn, but it included fine and coarse counts If the delegates agreed to this, then the resolution would read "for fine spinning and superior qualities of yarn"

With this alteration the resolution was passed for being voted upon on the last day of the Congress

COTTON BAGGING FOR COTTON BALES

The next subject discussed was "Cotton Bagging for Cotton Bales and Its Effects on the Process of Spinning"

The CHAIRMAN, in introducing the subject, said —

"Complaints from spinners relating to breakages of the yarn during the process of spinning, due to foreign matter have never ceased since the formation of the Joint Egyptian Cotton Committee

"According to information received by the Egyptian Section, some 80 per cent of those breakages were due to the presence of jute fibres The Egyptian Government, desirous of keeping up the reputation of Egyptian cotton, has taken the matter seriously into consideration and started making experiments for the substitution of jute by cotton bagging. Samples of the latter have in fact been exhibited at the meeting of the Joint Egyptian Cotton Committee held in Windermere last July. The samples then shown were found to be of a superior quality, being made of doubled yarn from long-staple cotton, a matter which entailed a good deal of expenditure which the present condition of the cotton trade would not justify.

" The discussion that took place at Windermere showed:—

> (*a*) That the cotton-picking bag carried the cotton all the way from the field to the press, and eventually formed the covering of a bale, although the cotton-picking bag might be used five or six times before eventually being placed round an export bale. However, provided the spinner will pay for the difference in cost, there is no objection to the cotton covering being used.
>
> (*b*) That some spinners have found jute fibres right in the interior of the bale. They were evidently intermingled with the cotton during picking. Some spinners were consequently of opinion that a cotton material should be used throughout the picking, ginning and pressing, and that jute should never come in contact with the cotton at any point in Egypt.
>
> (*c*) That, under present conditions, extra men had to be employed by the spinners to sort out the jute scraps from the cotton. The extra men employed and the claims which were oft-times made by spinners on account of losing production owing to bad spinning resulted in the cost of production being increased.
>
> (*d*) That cotton bags were being made in America and Brazil of inferior-quality cotton at a comparatively lower cost.

" The hope was expressed that the spinners would order experimental consignments of Egyptian cotton from the Giza Research Board and make spinning tests as to the number of end breakages in the case of jute bagging and in the case of cotton bagging, and submit the results to the International Cotton Federation or to the Egyptian Ministry of Agriculture.

" Since July, 1932, the Egyptian Government has been sending lots of ten bales each of the same variety of cotton, five of which have been covered with cotton and the other five with jute.

" Similar lots have also been shipped by the Missr Cotton Export Company to three mills in England.

" The question was taken up in Egypt by the Government on the one hand and by the Missr Company on the other. It was then decided to send certain lots of 10 bales each of the same variety of cotton, five of which were covered with cotton bagging and five with jute, and ask the opinion of the spinners about these trial lots. These were sent last January. Up to now we have no definite information as regards the results. Until we get this information I am afraid we cannot do much."

The CHAIRMAN then asked if any delegate had any remarks to make.

Dr. PICKARD (Director of Research of the British Cotton Industry Research Association) said that he would like to see some experiments carried out with an improved jute bagging. It was also necessary to know whether the damage done by jute fibres was excessive as compared with cotton bagging. Dr. Pickard then recalled that jute fibres may cause breakages in the yarn during the spinning process and, if they did not cause breakages, might be none the less troublesome, e.g., in dyeing, if they remained in the yarn. The latter trouble was difficult to estimate, but the breakages could be enumerated. He referred to the experiment of the Egyptian Government sending bales in jute bagging and other bales in cotton bagging and believed the Egyptian Government was now waiting for the reports from the firms which had used the experimental bales.

With regard to the work done at the Shirley Institute, they had had sent them roving samples from certain mills, but the marks on the rovings gave no identification as to whether the cotton used was spun from cotton in jute bags or in cotton bags.

From these rovings the yarn was spun into 100's and 80's. The number of breakages which they identified as due to jute and other foreign fibres varied from 2 per cent. to 9 per cent. of the total breakages. Assuming that this difference of 7 per cent. of the total breakages were due to the jute he questioned whether the diminution in total breakages by 7 per cent. would be worth the extra 5s. per bale.

Mr. W. H. CATTERALL (England) pointed out that breakages occurred more frequently in mule spinning than in ring spinning.

Dr. PICKARD said that the reason why their earlier experiments were carried out on ring frames was to get comparative conditions. It was very difficult for them to get comparative conditions in mule spinning with small samples. He was not suggesting that these were typical breakages for mule spinning, but he thought that there was the possibility that the percentage of breakages for mule spinning would not be greatly different.

Mr. CATTERALL: We have evidence that the bulk of the breakages were caused by the jute fibre.

Mr. ARNO S. PEARSE said it would be desirable to know whether the figures which they had received from Dr. Pickard referred to ordinary commercial shipments or whether they were State Domain shipments.

Dr. PICKARD replied that he thought the shipments from which the samples were obtained came from the State Domains.

Mr. GEORGE CLAPPERTON said that at the request of Sir George Holden they had certain bales tested and they found a very big difference in the breakages at the mill. Very few of the breakages resulted from the bales covered with cotton bagging. What was really wanted was some medium for an inside covering. Something like that used in sugar bags, with paper on the inside, so that the fibre would come away without bringing the jute with it. He was strongly in favour of something being done with regard to the bagging.

Dr. W. LAWRENCE BALLS (Egypt) pointed out that the cost of each shipment of approximately ten bales worked out at about £500, and hoped that some reliable figures would be supplied by the spinners of the results they had obtained, even if it took them the same amount of trouble and expense.

Mr. ARNO S. PEARSE said he would like some spinner to tell them how much money they estimated would be saved in the cost of production by the cotton bagging as compared with jute bagging.

Mr. CLAPPERTON pointed out that it all depended on the time it took to strip the bales.

Mr. JEHLE (Germany): We have made careful observations in our mill of the cost of stripping the cotton from the jute bags and find that it is 6d. per bale.

Mr. WM. HEAPS (England) said that the amount of cotton saved would amount to very little, because they insisted in their mills on their bales being thoroughly cleaned. There would, however, be the saving of time as regards cleaning off this loose cotton.

The CHAIRMAN said that it was desired that the expense of cotton bagging should not be much more than that of jute bagging. The variety of cotton from which the cotton bagging was made should not be of superior quality in the first place. He pointed out that in normal circumstances it would be the spinner and not the exporter who would bear the extra costs if the bagging costs increased, but it would be in his (the spinner's) interests to do so, because he would gain more by having the cotton baled in cotton bags than in the case of his cotton being shipped in jute bags.

Mr. CATTERALL said that he was aware of the fact that the jute bags made only two journeys as compared with four or five made by cotton bags. If the cotton bags could make so many journeys, then it was quite feasible that the cotton bagging could replace the jute bagging without any cost to the spinner.

Mr. ARNO S. PEARSE here pointed out that so far as the journeys were concerned, the difference in the cost worked out at only 0.08d. per lb., which was a figure so small that they could hardly express it in the quotations per pound of cotton.

The CHAIRMAN said that the framing of the resolution should be left in the hands of the International Committee, which should stress the desirability of continuing the experiments, particularly as regards mule spinning.

EGYPTIAN COTTON AND THE TYRE INDUSTRY

The CHAIRMAN His Excellency Ahmed Abdel Wahab Pacha said 'It has been the subject of great anxiety in Egypt that the tyre industry has, of late years, been using more and more other growths of cotton than Egyptian It was for this reason that the Egyptian members of the Joint Egyptian Cotton Committee at Windermere last year asked the International Federation to supply figures showing the consumption of Egyptian cotton in the various tyre industries and the other varieties of cotton The information which has been collected by the Federation and which has been distributed here has only been obtained from France and Italy According to these reports Egyptian cotton still maintains the foremost position in the supply of cotton necessary for the tyre industry According to the figures we have for Italy and France almost 75 per cent of the cotton consumed by the tyre industry is Egyptian cotton So far we have not been able to arrive at an exact figure as to the consumption of Egyptian cotton in the British cotton industry but we have the general statement from our friends on the Joint Egyptian Cotton Committee that the British tyre industry is still consuming Egyptian cotton in the largest quantities about 75 per cent of the cotton used for tyres in England being of Egyptian origin

THE EFFECT OF THE ARTIFICIAL SILK INDUSTRY ON THE EGYPTIAN COTTON INDUSTRY

The CHAIRMAN said that with regard to the extended use of artificial silk they had been promised by the International Cotton Federation that they would be supplied with figures to the end of December, 1933 The paper which M de la Beaumelle has contributed is very interesting," continued His Excellency "I am very sorry to see that artificial silk has been gaining ground to the detriment of Egyptian cotton, but at the same time we are still optimistic Egyptian cotton has still got its advantages and it still ranks superior to artificial silk The developments in the artificial silk industry during the next few years will undoubtedly throw more light on the subject We are also awaiting the figures that have been promised to us by the International Federation "

EGYPTIAN GOVERNMENT COTTON POLICY

His Excellency said he would like to make a statement in regard to the cotton policy of the Egyptian Government He said that the policy of the Egyptian Government with regard to the stocks they had in Alexandria—the stocks which had been bought as a result of the intervention in the cotton market in 1929 1930—had been covered by the declaration he made in Paris two years ago He said then that the Egyptian Government intended disposing of that cotton at the rate of some 100,000 bales a year ' We have kept very faithfully to that policy," continued His Excellency, " and there is very little cotton remaining '

" Out of 300,000 cantars there are no more than between

50,000 and 60,000 bales left. I say between fifty and sixty because there were 60,000 bales when I left Cairo a week ago. According to information I have received, more than 10,000 bales have been sold during the past week. We hope that by the next season there will be nothing left of that cotton."

With regard to the acreage policy, he said the Government was compelled to restrict the acreage last year, and the result was a very small crop. The Government, however, now had no intention of intervening, either in the market as a buyer or so far as restriction of acreage was concerned. "The market is going to be free, and the quantities produced, I hope, will be normal." He added that, in the opinion of experts, the new crop would be in the neighbourhood of 8,000,000 cantars.

His Excellency concluded by saying that the Egyptian Government hoped to continue its policy of mass production of "bread and butter" cotton, decreasing as much as possible the cost of production.

"To produce cotton at reasonable expense and with the greatest possible intensive cultivation"; that, in brief, is the Government's cotton policy, and he hoped this would ever be its policy.

This ended the session of the Egyptian Section.

MEASURING MOISTURE IN COTTON BALES BY ELECTRICAL CAPACITANCE.

By W. LAWRENCE BALLS, Sc.D., F.R.S.

This Egyptian Government publication was prepared in order to give those members of the Congress who are interested in a specialist subject some information about the investigations which have been made during the past eighteen months.

After showing the need for a rapid means of estimating the moisture content of every bale, the author gives the essential facts concerning bale moisture, about the relation of cotton to moisture, and about the influence of this moisture on the di-electric "constant" of cotton.

He then describes how, designing his method to fit the limitations imposed by the conditions of work in a pressing establishment, it is possible to use the hoops of the bales as if they were the plates of a condenser, and measure the capacity between them.

The results of tests on specially prepared bales are compared with their known moisture content, and an appendix gives an account of the radio circuits thus far employed in the investigation.

The present account is described as Part I, and will be followed by a more critical analysis of the the resistance and capacitance relations.

SECOND DAY'S PROCEEDINGS

Thursday, June 8th, 1933 10 *a m*

Dr G Mylius (Italy) in the chair

Dr MYLIUS, in opening the session, said —

"Our International Committee, owing to the much-regretted absence of Mr Brasseur, President of the Belgian Master Cotton Spinners' Association, has asked me to preside over this meeting, and I feel proud of the honour, although the great importance of the matters under discussion makes me feel that perhaps some other gentleman here may be more capable of undertaking this task than myself

"I take this opportunity of expressing to our Czecho-Slovakian colleagues my high appreciation of the way this Congress has been organized, and for the cordial hospitality and generous welcome extended to all of us

"Most of the items to be discussed this morning are connected with the world's crisis, which weighs so heavily on our industry

"I fear we shall be unable to put through a remedy capable of curing at once our grave illness, but the contribution of so many valuable papers will make it easier for us to agree upon the chief causes of the depression and perhaps enable us to suggest some practical means to overcome these evils Indeed, such a result would be a precious contribution to the hard task which is entrusted to the Economic Conference, towards which the whole world looks as the only body having the authority and the power to save us from destruction

"But alongside our views in regard to stabilization of currencies, curtailment of production and abolition of trade restrictions, there is the psychological side of the situation, which has a great deal of importance, and therefore we must begin by being optimistic, and impress upon ourselves that matters *must* improve Of course, we cannot hope that conditions will change in a day, but if the Economic Conference settles the monetary questions and succeeds in putting a stop to the evil of the excessive tariff-wall system matters will look more hopeful for us in the near future

"But everybody must show goodwill and contribute his best to the welfare of the community

"If it is considered necessary to introduce restrictive measures for the general benefit, everybody must fall into line, leaving aside personal selfish reasons, and not claim their own case to be an exception

"Only on this condition is success possible

"Mr Brasseur, who, as I mentioned before, should have presided at this session, has sent me his views upon these questions, and I propose to read a few of his remarks

"The agenda assigned to this morning's meeting bristles with difficulties Whatever opinion anyone may hold as to the cause of the crisis in the cotton industry, one must admit that its growth has been dominated by the development of the general economic crisis This question has been studied by organizations far better qualified to do so than our own, and we know how widely the opinions of authorities differ concerning the remedies which they would desire to apply Even at this moment the World's Economic Conference has this subject under close study, and it appears to me wiser to leave the choice of the various remedies for the cure of the general crisis to those who have the power to ensure their realization Moreover, our International Federation has already had the opportunity of expressing its opinion upon the subject of the different questions submitted to the World s Economic Conference This opinion is clearly stated in the resolution adopted unanimously by the members of the Sub Committee on Tariffs and Trade Restrictions which met in Brussels in December, 1932, and since confirmed by all the national Associations If you judge it fitting, this Congress could very well ratify anew its opinions upon these questions in transmitting officially the resolution adopted in Brussels to the President of the World s Economic Conference

"Perhaps you will agree with me that, limited as we are by time, we should do very useful work in considering more particularly those subjects vital to our industry

"Several reports prepared by specialists have stressed the danger which confronts the cotton industry in the unbalanced state existing between world's production and world's capacity of consumption Quite recently the International Committee was unanimous in recognizing the danger of such a situation

"We are of the decided opinion that international action alone could efficaciously improve the present economic conditions of our industry, and it is most desirable that the agreement should not be limited to the European countries alone

"However, such an important movement presupposes the existence of national organizations both strong and disciplined capable of obtaining from the industry as a whole the assurance that the recommendations and the resolutions of the International Federation may be carried out

"In the different countries represented here today serious efforts have been made in this direction, and in certain cases the results obtained have been very encouraging we shall have the opportunity, I hope, of profiting by the experiences of those of our colleagues who have collaborated in the organization of their own national industry In particular, I refer to the interest which has been given to the report presented and prepared by Mr Otto Bankwitz upon the organization of the Polish Cotton Cartel

"The lack of balance between the possibilities of the means of production and the demand is forcing industry into a price war, not only in the international markets but also at the same time in the home markets Even the mills established upon a sound basis find their very existence menaced because there is no business which is able to resist indefinitely this practice of selling below cost of production

"It seems to me that the industrial organizations must play a still more important rôle in the future Certain Governments, convinced of the necessity that industrialists must follow a policy of organized production, appear to have decided that authoritative intervention is necessary in such cases where the industrial leaders are not able to agree among themselves

"Perhaps this is a menace which it would be as well not to ignore, and for my part I think that the industry has all to gain by taking its own spontaneous initiative in this reorganization

" The session this morning will bear fruit if we part convinced of the necessity for each one of us, in our own mind, to work together in the building-up of our respective national Associations with a view to making effective international co-operation possible "

Mr OTTO BANKWITZ (Czecho-Slovakia) then introduced the subject of his paper

" My written report lies before you—it consists chiefly of statistical material which I have collected during many years of observation I will therefore try, during the short time which is at my disposal, to stress the chief points of my report First of all, if we compare the pre-war years 1912-1913 with the years 1931-1932, we find that the world consumption of cotton has sunk from 23 million bales to 22 4 million bales, in spite of the increase in the world's population from 1 7 milliard to 2 milliard people, so that the world's cotton consumption ought to amount to at least 27-28 million bales, and in spite of the fact that cotton goods have become so cheap and that so many millions of people are not yet using cotton We know that the use of artificial silk has made inroads into cotton consumption, but this amounts only to 200 million kilos yearly, which corresponds to a little more than one million bales The chief reasons may be the trend of fashion during the latter years and the wave of economy, both of which are connected with the crisis and unemployment

" Under those circumstances one must ask oneself why the world's spindles during this time have been raised by 20 millions, and are being increased still further You will see from my tabulations that this increase has not taken place in Europe In Europe the increase amounts only to 2 million spindles, whereas Asia has added 12 3 million new spindles, South America 2 2 million, and sundry other countries 1 1 million

" In general, it can be seen from the table, that many countries which previously exported their agricultural and colonial products and imported cotton goods in exchange are now manufacturing their own

" This state of affairs is now easily recognizable when one realizes that from 1913 to 1932, in Europe, the number of spindles remained practically unchanged in spite of a reduction in consumption from 12 3 million bales to 8 7 million bales

" The loss, therefore, amounts to 3 4 million bales, or nearly one-third, whereas the cotton consumption in Asia (chiefly in Japan and China) by a spindleage increase from 9 to 22 million spindles, has grown from 4 million bales to 7 7 million, a gain, therefore, of 3 7 million bales

" The spindleage in America has remained unchanged, and this can be said also of the consumption Further reference to these tabulations will demonstrate that year after year 250-300 thousand bales of cotton are switched from Europe to Asia, and that the time is not very far distant when these two continents will consume the same quantities One asks oneself, what are the reasons for these changes? They are due to the currency vicissitudes and the commercial balances In countries which do not possess a textile industry the textile imports amount to nearly 25-40 per cent of the total imports, and this is the reason why they endeavour to free themselves from this burden Nevertheless, the fact is overlooked that their imports pay for their agricultural exports

" We can see these phenomena taking place near at hand, in Hungary, Yugo-Slavia, Greece, Bulgaria, and other countries But I will leave this point, and briefly show how the cotton consumption in Europe has gone back to 86 bales per 1,000 spindles, whereas in America it amounts to 156 bales, and in Asia even to 362 bales per 1,000 spindles This uneven degree of employment is one of the chief reasons of the crisis The start could be seen even before the Great War, only at that time not much notice was taken of the pointers in this direction After the War the destroying forces grew to an avalanche !

" I have calculated that, in order to consume 23 million bales of cotton the spindles of the world need only be occupied weekly at an average of 39 hours, in reality, Europe works far less than 39 hours, really working only about 30-34 hours, whereas America works 50-58 hours weekly, India 60 hours, Japan 102 hours, and China works nearly 132 hours One sees in the world the same tendency as in every individual country, in that certain spinning firms work double shifts, whereas other spinning firms are forced to reduce to half-shifts or to close down altogether as a result

" I will prove to you that the double shifts are the chief reasons of the present crisis, because they make fair competition impossible In my written report I have calculated in one tabulation that the spinning costs per kilo of 24's yarn amount by half-time working to 21 cents, whereas when working 75 per cent of full capacity they amount to 18 cents, and by normal working of 46 hours weekly to only 15 cents, and by double shifts only to 12 cents, including depreciation and interest

" If, in a country, ten similar spinning firms cover the country's consumption by normal working, and the price of cotton amounts to 25 cents, and the spinning costs as before mentioned amounting to 15 cents, the production costs therefore totalling to 40 cents per kilo, if the sale price amounts to 41 cents then all the spinning firms show a reasonable profit of 1 cent But if only one of these ten spinning firms goes over to double shifts then there is an extra profit of 3 cents per kilo , as I mentioned before, then, theoretically, two other spinning firms must run half-time and make their production 7 cents dearer, or four spinning firms reduce to three quarter shifts and make their manufacturing costs 3 cents per kilo dearer In reality, when some spinners have foresight, and go over to extra shifts, the remaining mills must either reduce production or cease work completely

" The uneven race has arrived The man with one leg amputated runs a race against a man with two sound legs The two-legged man has put himself upon a " double-shift " horse to make quicker progress

" And this unbelievable race is really taking place What is the one-legged man to do ? "

" First of all, one rationalizes Still a few hundred spindle-revolutions more per hour The impetus is increased A few more workers are not needed A few more officials dismissed The saving in production costs is infinitesimal it amounts only to tenths of cents, whereas really a reduction amounting to 5-7 cents is necessary It does not matter, the whip of the competitor falls upon the straggler To be able to run more quickly he throws away the depreciation Again, another lash of the whip He throws away the interest But all without avail He must give up the race, or else he must throw away still more But even the running of double shifts gives no pleasure in the race Others are taking up the same idea, and now they are running against each other Through over-production, the sale price drops from 41 to 37 cents, for, first of all, they only sacrifice their profit, then it sinks to 35, because they have to throw away their depreciation, then to 34, to 33, to 32! The losses have affected all For some only a little less, for others more

'Unfortunately, some of those running have had a certain feeling of satisfaction if a neighbouring competitor has fallen out by the roadside, but this is only premature joy The number of spindles in the country has not been thereby diminished, the falling spinning firm only changes the proprietor, this new owner buys it for next to nothing, and begins to run without any encumbrances In this "six days' race," which has already existed in our industry for several years, even those most capable of resistance—the most prosperous firms—cannot keep up for long Consequently we have a continual war of attrition and a weakening of each other, which benefits nobody, not even the consumer You can observe the picture in every country, but it also illustrates the situation between country and country and continent and continent

"Those who read my report more minutely will find that already certain groups have taken shape

(1) *Great Britain*, of its total of 52 million spindles, only requires 8 millions for its own home trade and 44 millions for its export, therefore, clearly an export country

(2) *Other European Countries*, with about 50 million spindles, their production is mainly destined for the home market

(3) *Russia*, with its 9 million spindles, takes up its well-known peculiar position

(4) *America*, with its 36 million spindles, which are catering almost solely for the home market

(5) *Asia* or better termed Japan and China), with its 22 million spindles, which are not sufficient for Asia's requirements

"The number of spindles is growing from year to year, and will make the previous importing countries exporting countries If we eliminate Russia and America from our consideration for the present, because these groups are less concerned with these exports, then only really two groups confront each other in the world competition Upon the one side, Great Britain and Europe, on the other side, Japan and China, because India can even still be considered as part of Great Britain, because she is in a similar position to that of her Motherland How this contest will end is not difficult to forecast

"My tables show the previous course, and it is quite easy to picture to oneself the future England and India have improved their markets through the Ottawa Agreement and when the pound fell, but it is doubtful whether these means will always be helpful They are rather like a dose of medicine

"For the other markets England competes exactly like the rest of Europe against Japan and China

'The European team is handicapped by internal competition Each player expects to receive a side-push from his neighbour, the team is so ill-trained that it even starts very fatigued It is similarly well-handicapped from the commencement, owing to the dearer manufacturing mule spindles Handicapped through dearer short-time, handicapped through debts and interest, handicapped through taxes and social burdens (the latter are unknown in Asia), handicapped through wages, which are two to three times as high as those in Japan and China, but chiefly handicapped through lack of a united organization The Japanese and Chinese team is strengthened through gains during the last decade Japanese mills nearly always pay 14 per cent dividend, and during the war they paid 25-50 per cent dividends The Asiatic team is also strengthened by having written off factories and by reason of big reserves, so that practically it can cost without allowance for depreciation It is strengthened by the cheaper double shifts and by the wonderful workers' community, but it is as well capable of competition through the cheap working wages in Japan, and especially China I do not even take into consideration the fall in the yen

"Chiefly it is to be feared because of its mutual organization and statistical service, to which no European can reach and which puts it in a position to suit the production exactly to the demand, and even to organize the exports

"Ladies and gentlemen, which team will win? The match is too one sided Much to my regret, I would place my money on Japan and China Are you still surprised when you read in the last issue of the INTERNATIONAL COTTON BULLETIN that Japan's exports have gone up within one year (from 1931 to 1932) from 1 4 milliard to over 2 milliard square yards, and that of Japanese exports alone 32 per cent goes to British India, 17 per cent to Dutch East Indies, 10 per cent to Egypt, 2 per cent to Africa, and 2 per cent to Turkey

"The victorious march of the Japanese goods overran the Suez Canal long ago, the Japanese ball is not so far from our own goal Our unorganized and fatigued team runs about without any set plan upon the field, and can no longer stop our opponents, indeed, we have not even a goalkeeper We have not the power to think or, still less, to take up an aggressive position but must be satisfied with a defensive position and this must be done as quickly as possible, before it is too late

"First of all, we must be clear about the causes if we want to discuss the means of redress We must be resolved that our fighters should first of all collect their lost strength Our weakened industry has not the same fighting strength as that of the Japanese and Chinese In my written report I have suggested a few ways, but it is useless to believe that we can regain the lost 3 5 million bales We must be satisfied if we can only check the losses, and if we can only secure at least a part of our previous total exports We must rejoice that we are not overrun in our own country, and that we can at least maintain a little order among the remaining ruins and debris in order to be able to live modestly

"From my written report I shall repeat briefly the four chief points which may bring relief

(1) There are more spindles in the world than are necessary for the demand, because, as I have already pointed out, by even distribution of the demand among the whole spindles of the world, the latter are only able to work about 39 hours weekly One must also endeavour not only to refrain from erecting more new spindles, but also to dismantle the surplus spindles according to plan or, better still, to destroy them altogether

(2) A further way out is to shorten the working time internationally I beg you not to misunderstand me I do not intend to plead here for the 40-hour week of which I am a supporter, but really there exists only an ' either ' or an ' or ' Either the spindles must be destroyed or the working time must be shortened to correspond to the demand

(3) The unevenness of working of individual factories must be avoided, in order to create once more a mutual basis for calculation The double shift must therefore be opposed

(4) From the three above mentioned points it follows that an agreement inside the industry is necessary Everything points to the fact that the European spinning factories will perceive that it is useless to fight against the whole world individually It is far better to unite and to progress mutually In all European countries there should be created mutual quota agreements, so that finally a European agreement will be possible In the present state of affairs we must formulate a suitable economic plan it will be far better if the plan comes from within the industry itself instead of from our Governments

" The fourth point of my general programme is also necessary, because, without mutual understanding, the realization of the first three points is impossible

" Due to the general over production in every individual country, the home requirements of the country must be regulated The export trade can be left alone as a safety valve, or perhaps an export agreement may be formulated It must not have one-legged men competing in a race with mounted two-legged men Mutual confidence is necessary, and fair play should be the future motto of the spinners, then it will be found possible to carry out the points of the general programme

"Then, and only then, will it be found possible to combat the erection of new spindles and to formulate a scheme for the destruction of superfluous spindles uniform working agreements can be made, and the unsound double shift can be eliminated

" In my written report I have sketched the basis for a quota agreement which has proved very valuable during the last two years in Poland

" In conclusion, I repeat my recommendations First of all all countries should arrive at quota agreements as quickly as possible, and organize the collection of monthly statistics of production, sales, and so forth

" Secondly, I should advise closer co-operation between the European countries

" Finally, that some scheme should be decided upon between continent and continent with regard to export competition, or, what I should prefer even more, to arrive at some such agreement here to-day

" Finally, I close with the hope for—

" Fair play between continent and continent."
" Fair play between spinner and spinner.
" Fair play between country and country.

Dr. MYLIUS, the Chairman, thanked Mr. Bankwitz for his paper, and for his very able speech amplifying its main features.

Mr. PAUL SCHLUMBERGER: " I thank Mr. Bankwitz for his excellent report, which sets forth, a trifle forcibly perhaps, but justly, the actual situation of the textile industry.

" What have we seen in our country during the past three years? In 1930 we tried to organize the control of production and consumption, but the individualism which characterizes spinners and weavers has prevented us from making them understand that they should subordinate their own interests to the general welfare. The consequence has been the coming into play of competition, and what Mr. Bankwitz has just mentioned has started to manifest itself. The best organized mills have worked under difficult conditions, and the less well-equipped, experiencing unfavourable conditions, have either had to close their doors or will recover only with difficulty.

" The comparisons made by Mr. Bankwitz between the conditions ruling in various countries applies equally to those of each country, under conditions, varying perhaps, but, generally speaking, practically similar. I infer then, bluntly, that if you are not willing to submit to a dictatorship which would take into its hands the spinning and weaving industry, you run the risk of arriving at nothing; if you would give full powers to an organization, and nominate a delegate as dictator for each country, the office of the Federation would be changed to that of a dictator with full powers.

" The task is a very difficult one, and the plan even seems to me unrealizable, because we, being individualists, are not yet ripe for such a solution, and it would be asking for a sacrifice which might perhaps be beyond our powers, beyond the powers of the spinning and weaving industry.

" But it is just that which Mr. Bankwitz has tried to point out in his report. I am not as pessimistic as he. I believe that the efforts which we are, all of us, making will lead to a clarified grouping of the various industrial countries. China, Japan, France and England will discuss the question at the London Conference. This cannot be beyond human power."

Mr. CASPAR JENNY (Switzerland) said: " I thank Mr. Bankwitz most heartily for his exceedingly interesting and able paper, and I hope he will forgive me if I offer certain criticisms upon it.

" To my mind, he is too pessimistic," declared Mr. Jenny. " There is also too much resignation expressed in his paper. Mr. Bankwitz speaks of a dying European cotton industry. It seems to me that he has not much hope for any restoration of the international exchange of cotton goods, at least as far as the European countries are concerned.

" Without a return to free trade and to stable money, Mr. Bankwitz is perhaps too optimistic. There would arise, with all the reductions proposed from year to year, more over-production in Europe, and Europe would have to come down to a standard of living which would be extremely primitive, but if we at least come back to a state of normal international trade, Mr. Bankwitz's views are, in my opinion, too pessimistic.

"Mr. Bankwitz is practically giving up international trade, as far as European countries are concerned. He is of the opinion that the self-maintaining economy is coming. European Governments after the war all promised the masses of their peoples better standards of living and better conditions, but they neglected the increasing competition from other continents. This policy, which has brought us Government interventions, tariff walls, trade restrictions, was, as we can recognize now, quite wrong, and has to be abandoned if we do not wish to risk arriving at a situation when life in Europe would be a torture. The reduction of costs of production, through inflation, can perhaps be understood when it is done once in countries where the burden of war debts is too heavy, but the money of these countries should be re-established on a new basis as soon as possible, because, without stable money, international trade is impossible.

"Countries which resort to inflation," continued Mr. Jenny, "merely for the purpose of knocking down competitors, will have to return to a stabilization much quicker than they expect, for the national fortune would very soon be lost. It would be given away as a present to customers abroad. Even the Japanese tree cannot grow to heaven.

"In my opinion, we are not allowed to believe in 'self-contained countries' unless we do not wish to make of Europe a continent with half the population she has now. But also if we expect better international relations, certain reductions in production in Europe are necessary. I agree with the scrapping of old mills in each country, especially the buying-up of obsolete plant for scrapping purposes through the spinners' or weavers' organizations in each country.

"The propositions of Mr. Bankwitz can be discussed, excepting the 40-hour week, which I think I, and also the Committee, very strongly oppose. Many countries have not yet agreed to the 48-hour week, and work their mills up to 60 hours and more per week, and in two shifts!

"Our best customer is the farmer, and we are all anxious that his situation will improve. Nothing has done him so much harm as the 48-hour week in practice, because, through its introduction, there has been a real exodus of agricultural workers into industry, where very often, instead of working, they get the 'dole.' The result is that farmers in many countries cannot get enough labour.

"You may be quite sure that we in Europe would conform to any change in the working hours, whilst in the rest of the world little attention would be paid to it. A reduction to 40 hours per week necessarily means some considerable increase in actual wages, probably 20 per cent.

"I feel it my solemn duty," continued Mr. Jenny, "to warn this Congress not to have anything to do with a further reduction in the working hours. First of all, let us see the other countries come down to our 48 hours level and to one-shift working before we begin thinking of any further reduction." (Applause.)

His Excellency **AHMED ABDEL WAHAB PACHA** (Egypt) asked whether he might be allowed as a layman to express one or two remarks. His Excellency remarked that the facts contained in the paper compiled by Mr. Bankwitz were acceptable until he dealt with the proposed remedies.

"The proposals are very interesting on paper, but very difficult to execute," said His Excellency. "Mr. Bankwitz suggests as a first remedy that the number of spindles should be greatly diminished. He says that the present system is obliged to create surplus spindles. In another place he states that we must fight. With the developments of the big structure of nationals in the various countries, I am afraid that these proposals of Mr. Bankwitz cannot be realised under the present circumstances. It would take a good deal of time before individualistic feelings were done away with.

"Mr. Bankwitz suggests, in the second place, the 40-hour week as a remedy for the depression. I am not in a position to talk about the hours of industry, but I am sure our Japanese colleagues will have a lot to say about this matter.

"I am afraid that the industrialists in those countries where labour is cheap and where national circumstances are different from those in other countries, will not easily acquiesce to such proposals. Equally unsuitable is the third suggestion. Every country has its own special circumstances, its own national aspirations, its own system. It was very difficult to suggest the execution of a uniform system in every part of the world. He suggests that the world should be split up into different markets. Mr. Bankwitz demands that which cannot be done. Japan and China would have to be left apart. Russia would have to go its own way.

His Excellency further stated that by double-shift working and standardized methods the Japanese and Chinese could produce cheaply, which made it very difficult for the American and European industries to compete with them.

"In my opinion, a situation that seems so obscure at present must before long clear up. First and foremost the questions of general economic interest must be solved. The questions of currencies, the general level of prices, the purchasing power of the big populations—credit and its organization, and the restrictions of trade, currencies restrictions, boycotts—these are the general questions which are before the whole of the world. Once these questions are settled, then we shall be in a position to prescribe remedies."

"Such remedies as prescribed by Mr. Bankwitz," concluded His Excellency, "can only be theoretical."

Mr. **FRED MILLS** (England) said that he had much sympathy with Mr. Bankwitz's ideas. He continued by saying that His Excellency Ahmed Abdel Wahab Pacha suggested that they could get things done by working. "And," said Mr. Mills, "we can do a great deal.

"One of the greatest problems to-day is foreign competition. I would like our Japanese friend to say something. Like our Continental colleagues, we in England are very interested in the activity displayed by Japan. We want to hear a lot about them and we want our Japanese friends to realize that they are members of the International Federation.

SPEECH BY MR. K. SHIMADA (JAPAN).

Mr. K. SHIMADA (Japan): "May I be permitted to avail myself of this opportunity to give expression to the most cordial and loyal sentiments which the Japanese Association feels towards all the members of the fellow-Associations who have assembled in this Congress. In spite of the kind invitation of our President, my Association regrets being unable to send its delegation to this Congress direct from Japan, owing to the journey involved requiring at least three months, and in these difficult and anxious times no one in the industry could find sufficient time at his disposal to make a trip to Europe.

"But they asked me to expressly assure you that they have every respect and sympathy for the great task confronting you at this Congress, and they wish me to make it quite clear to you that they are always ready to examine in a co-operative spirit and on an equitable basis any international scheme which you may be able to develop at this meeting or at any other time with a view to alleviating the world's economic evils, from which the cotton industry is no exception.

"Now, coming to the subjects on the agenda, I find it convenient to deal with subjects (*a*) and (*b*) at the same time, because these two questions are, to a large extent, inter-related.

"Previous speakers (and also many interesting papers circulated amongst us) have each in their remarkable ways dealt with the various causes of the depression, and I find very few points in them to which I feel disposed to take exception. They have covered almost the entire ground, and have left very little for me to comment upon.

"However, I will try to submit a brief observation on one of the salient factors of the present depression, as it appears to the Japanese eyes.

"Among many vicious manifestations of the economic evils which surround us at the present moment I consider the most vital cause is to be found in the disparity of the price level between primary commodities and manufactured goods, as demonstrated by an eminent French authority.

"The world economy can be said, in large measure, to consist of the exchange between these two sets of commodities. This is particularly true in the case of cotton industries. Overseas markets for cotton goods are mainly found in agricultural countries, and even in manufacturing countries the bulk of the home demand of cotton goods comes from the farming communities.

"It is common knowledge to-day that the fall in prices of all primary commodities is by far greater than that of manufactured goods. Whilst all primary commodities are left to find their own price level by the natural law of economy, manufactured goods, by virtue of a number of artificial and selfish measures, have shown great resistance and have failed to make a sufficient downward movement to accomplish the necessary adjustment.

"The most important primary commodities, such as grain, cotton, rubber, and so forth, have lost very nearly two-thirds of their value during the past five years, while most manufactured goods did not respond to this downward movement half as much.

"This disequilibrium is perhaps mainly responsible for the initial under-consumption of manufactured goods by the majority of the world's population, who depend upon farming for their maintenance. Under-consumption of manufactured goods is clearly borne out by the fact that there is to-day over 30,000,000 unemployed in Europe, Great Britain and the United States, and yet one is faced all the time with the ever-increasing difficulty of finding markets for the goods, the production of which has been drastically cut down, but the price was not sufficiently lowered to stimulate consumption.

"If, at this stage, further attempts were made to curtail production sufficiently enough to raise the value of manufactured goods, the evil of under-consumption must of necessity persist still further until we should find ourselves once again caught in a graver difficulty, resultant of ever-shrinking markets.

"The Economic Intelligence Department of the League of Nations has recently published a statistical report on the total value of world trade for the first quarter of this year. Most likely many of my colleagues here are in possession of these figures, but I may mention that this report states that the total value of the world's trade has been steadily decreasing for the last five years, until for the first quarter of this year it is not more than 35 per cent. of what it was five years ago—that is, the first quarter of 1929.

"It is hardly necessary for me to emphasize the seriousness of the situation, but I feel compelled to draw your attention to the danger of relying too much upon the restrictive measures of production, as such attempts which have been applied in the past years in a number of affiliated Cotton Associations, not excepting Japan, have proved quite inadequate, if not injurious to the fundamental recovery of the cotton industry.

"We must not shut our eyes to the unpleasant fact that cotton goods, along with other manufactured goods, are altogether too expensive to enable the majority of consumers to buy what they are normally entitled to consume. In order to make cotton goods available for the reduced purse of the farmer it is vitally necessary, not only to reduce the cost of production, but to make every endeavour to remove artificial barriers of trade, such as boycotts, high tariffs, quotas, preferential duties, exchange restrictions, and so forth. All these palliatives contribute to make the price of manufactured goods unbearably expensive.

"For argument's sake, if the discrepancy of price level was removed there is no reason to suppose why the normal and free flow of interchange of commodities should not take place, thereby restoring the cotton industry to its former prosperity.

"Although I fully realise the tremendous difficulties in the way of achieving such drastic price adjustments of manufactured goods to the corresponding level of primary commodities, it is, nevertheless, true to say that under-consumption must inevitably persist until this fundamental readjustment is accomplished.

"Quite possibly we may reach this happy state of equilibrium by the simultaneous rise of primary commodities and the reasonable reduction in the cost of production of manufactured goods, through wage reductions, technical improvements and scientific management, but more particularly by the removal of all trade barriers.

"Amidst the darkness of the unprecedented economic disorganization I am happy to perceive, as no doubt, ladies and gentlemen, you have also perceived, a gleam on the horizon, which I ardently hope will, at no distant future, deliver us from the vicious cycle of falling prices.

"I am referring to the fact that for the past three or four months there has set in a steady rise in the prices of primary commodities, which movement, if supported by the successful issue of the London Economic Conference, will, let us hope, at least go a long way to solving our common problem.

"Before concluding my speech I wish to add a few words on the present position of international trade of my country as a whole, as I thought it may be found interesting to some of you here, who might possibly regard us as the *enfant terrible* of international trade.

"Please remember that Japan buys in the world's markets more than she sells. Her imports have always exceeded her exports. Besides, we have foreign loan obligations which we are determined to meet at all costs. With a favourable balance of invisible exports, mainly shipping income, we are just able to balance our international account.

"By buying in foreign markets as much as we do, I feel we are entitled to sell as much as we are selling at present. As to the complaint made against Japan, particularly the cotton industries, of selling cheaply, the blame ought really to be put on the buyers. You know quite well from your own experience that no sellers, even cotton spinners, would prefer to sell at a lower price than they are positively compelled to accept.

"If you go a step further into this question you will at once be confronted with the undeniable fact that the economic development of the Western nations has been achieved mainly through reductions in the cost of production by the application of mechanical and chemical knowledge as against the old methods of manual or antiquated appliances.

"There can be no wrong, morally or economically, in supplying mankind with the necessities of life at low prices. On the contrary, the *raison d'être* of any industry lies in its ability of making its products available to a wider and freer consumption by humanity."

Herr ERICH SEUTTER-LOETZEN (Austria): "I am not surprised that the excellent explanations of General Director Bankwitz have found so many critics, because the industry which we represent has become of great importance under the reign of Liberal ideas, and we have all grown up under these views. But these principles, which have powerfully supported an ever-expanding and energetic industry, act as a counterblast from the moment when this industry is not able to develop any further; it is forced on to the defensive, and must have, in the first instance, the strength to keep itself alive, even although in a smaller capacity. Therefore nothing remains but that we should educate ourselves in accordance with the new economic facts.

"That the ideas which General Director Bankwitz developed are correct has already been proved by experience. He himself has mentioned as an example the Polish cartel—we in Austria also have had similar experiences. For over three years we have had a spinners' cartel, which was created voluntarily and co-operatively by all the working spinning firms. This cartel distributes the yarn orders of the inland market among the spinners. Yarn prices, which, before the organization of the cartel were so unsatisfactory, have now so much improved that at least in the home market no sales are made at a loss, and there remains a modest profit to the cotton industrialist.

"During the last year we have had the unpleasant experience of two spinning firms, which had closed down before the founding of the cartel, reopening, and they found a bigger market than any of the others, because they were not members of the cartel.

"It is quite natural that in such cases the help of the State would be desirable in order to force these outsiders into the cartel. Such compulsory measures are no doubt revolutionary, but could be defended from the democratic point of view. Should such measures be obtained, only a small minority is forced to follow the wishes of a preponderate majority. As for the guidance of the organization, no dictation and no further interference on the part of the State is necessary; the control of the cartel should be vested solely in the hands of the industrial association.

"The spinning and manufacturing associations of each country should first of all organize themselves in this way, and, if necessary, call in the aid of their Government. Only when this has been done can any step succeed in an understanding between the individual national associations upon an international basis.

"This understanding will be necessary for the old industrial countries, in order to distribute their exports in the markets of those countries still capable of absorbing goods, and to take common measures against the competition of the new industrial Eastern Asiatic countries, with their much cheaper wages. One really owes such protective measures to the workers of our countries, so that we may give them further work and the wherewithal to live.

"One of the previous speakers has said 'The fruit is not yet ripe.' It is only to be hoped that it will not rot upon the tree before we all agree that it is sufficiently ripe for picking.

"We have not much time to lose; if we retain our old methods our industry can no longer exist."

Mr. FRED MILLS (England) said that he had much sympathy with Mr. Bankwitz's ideas. He went on to say that His Excellency Ahmed Abdel Wahab Pacha suggested that they could get things done by working. "And," said Mr. Mills, "we can do a great deal."

"One of the greatest problems to-day is foreign competition. I would like our Japanese friend to say something. We in England, as you are on the Continent, are very interested in Japan. We want to hear a lot about them, and we want our Japanese friends to realize that they are members of the International Federation."

"We want help from them in that capacity. I still think we shall get enlightenment from them. My great friend, the late

Mr. William Howarth, once came forward and made a definite plea for uniform working hours. He told me that after the reception he had that he would never repeat the experiment.

"It is not easy to have uniform working hours, but I suggest that there is one thing that has got to be eliminated, and that is double shifts. In regard to the 48-hour week, it should be uniform. To be effective, however, it must be without any qualification whatsoever. We have all had experience as to the interpretation of the 48-hour week by our friends. We have had the 48-hour week convention in England, and we have carried it out. We have entered into that agreement with our operatives. I do not agree that the working hours are too long, if they are rigidly adhered to.

"I welcome Mr. Bankwitz's statement," continued Mr. Mills, "and I hope he will not be deterred by criticism."

Mr. Mills said that it appeared to him that the paper of Mr. Bankwitz had made very little impression on the English spinners. "I want to deal with the real problem," said Mr. Mills, "as to why more trade is not taking place.

"There is a reason, and, in my opinion, what we are suffering from is under-consumption."

Mr. Mills then drew the delegates' attention to a statement on page 20 of Mr. Bankwitz's paper, and quoted the following:—

> "Of course, it would be far better to come to some peaceful understanding before continuing the struggle on a more intensive basis. Does the industry as a whole possess the necessary international insight? Do we trust each other enough to be able to work for the world's peace in the cotton industry?

"Gentlemen," concluded Mr. Mills, "that is the question I put to you."

Mr. H. H. LAKIN (India) said that, as representing the Bombay Millowners' Association, he was very interested in the remarks in Mr. Bankwitz's paper, particularly the statements on page 18, where Mr. Bankwitz referred to unfair competition. He gave the delegates an instance of this unfair competition which had occurred two months ago prior to his leaving Bombay.

"Our mills," said Mr. Lakin, "were asked to quote for a certain type of yarn and we quoted the price by cable. We did not get a reply by cable. We received a letter subsequently stating that the price we had quoted for the yarn was as high as the price of the Japanese cloth. I would not admit that there was either the ability or experience in Japan to manufacture at such a difference in price to beat either India, or the world, to that extent.

"We in India," continued Mr. Lakin, "have been suffering from Japanese competition. If you hold conferences every day in the week, nothing can be done against such competition as I have just mentioned." He emphasized the seriousness of the depreciated value of the yen as compared with the rupee, and concluded by saying that until the question of exchanges was tackled, whatever else they might do at conferences or elsewhere, they would not be able to restore trade and confidence in prices.

Mr **Maurice Dubrulle** President of the International Wool Textile Organization) then spoke He said he wanted to thank the President and the delegates for their very kind invitation to him "I must apologize," said Mr Dubrulle, ' for my imperfect English, as I am a Frenchman being compelled to speak in English " He went on to say that the reason he desired to speak at the Congress was because so many questions and problems which interested the cotton industry also interested the woollen industry

"As regards the technical subjects I have nothing to say because you work the product of the flower, but I work the product of the sheep

"On the other hand," concluded Mr Dubrulle, "I think in general subjects there are many questions which are quite the same for cotton as for wool For instance, limitation of prices, the fall in value of the raw material, and also the causes of the world-wide trade depression, many references to which have been made at this Congress to-day

"At this juncture I should like to say to you that the wool industry is the first industry in the world which has taken steps to combat the things which are doing you harm " Mr Dubrulle continued by stating that in 1932 steps were taken in the woollen industry to obtain lower tariffs, and he referred to the agreement of Tilburg "Czecho-Slovakia joined us Belgium joined us But then we came to Great Britain, and there was the difficulty "

He went on to say that they would always be faced with difficulties until the question of currencies was settled

"It is a man of experience who is speaking, because I have been tackling the subject for many years There can be no recovery in trade unless we get money stabilized You must all speak the same language You can measure the yardage of your goods so that the yards all contain the same number of inches

"The first question is a financial question We want to get a real basis Before getting the political basis we must get first a financial basis The economical basis will come afterwards

"The first question is a financial question We want to get a real basis Before getting the political basis we must first get a financial basis The economical basis will come afterwards, and I am sure that the political basis will be the result of it in the end

"Let us make a marriage of reason and the love affair will go on afterwards," concluded Mr Dubrulle, amidst loud applause

Mr Bankwitz then replied at length in German as follows —

Director **Otto Bankwitz** "The time has now arrived when I must reply to my esteemed critics

"First of all, I would like to say that there is not much difference of opinion between us The kernel of my discourse is the copious statistical tabulations upon which I have spent most time, and which I recommend to your private study My discourse was, in a sense, the sauce The sauce anyone can change according to his taste, but the kernel remains I myself wish most heartily that my ideas should prove to be pessimistic Nothing remains but to point out the ineffaceable course of the figures of the last decades, which naturally cause me to be pessimistic.

"The President, Mr. Paul Schlumberger, has rightly said that for a satisfactory execution of my proposed remedies, a dictator would really be necessary. By reason of my own practical knowledge in Central Europe I have perceived that the need is such a dictator, but that a voluntary unification, with a little goodwill, is still possible. For example, I have mentioned just now Poland, Austria and Czecho-Slovakia, where such quota agreements already function—America and Germany ought soon to follow. I quite admit that in every country there exist opponents of measures, and that very often not only do they require a little gentle persuasion, but also a little gentle force is often necessary. In Poland the Government had to step in, by means of an arbitrator appointed by the Ministry, and through a so-called customs duty of 45 zloty per 100 kilos. of cotton—i.e., about 5.2 cents per kilo. But, of course, 100 per cent of the spinners have now united and carry out the business of their own combine. This cartel has worked satisfactorily without complaint for the last two years, and it is a pleasure to state that although the price is uncontrolled, three months ago, when cotton was being quoted at 6 cents, the yarn price obtained for 24's for net cash was 38-40 gold cents, a price which included all depreciation and interest, leaving a modest profit, which is (even elsewhere than Europe) an isolated exception to-day. By reason of a new law which came into force quite recently 10 per cent. of the members of the cartel have given notice to the agreement—but merely with the object of bargaining for a higher quota, which at such reasonable profits is easily understandable. They will soon rejoin, either through negotiation, or because of the customs duty. The direct consequence of their notice was that the prices sank at once by 3-4 gold cents—a better proof for the necessity of the production quota is scarcely needed.

I quite agree with Mr. Jenny that by free currency administration and free unfettered commerce, consumption might again increase; for the present, however, we cannot reckon with the fulfilment of this wish. The shifting of the export trade from Europe to Asia has taken place at a time when there were no currency restrictions and when commerce was entirely free. I beg you to pursue my tabulations for the years 1919-29. There were other reasons which caused this movement.

The prejudice against the 40-hour week is easily understood from the desire to work, which inspires all industrialists. I am to-day no longer an active spinner, and I am therefore entirely free from prejudice in regard to this question. I recollect quite well that 30 years ago I worked 12 hours each day, afterwards only 11 hours, and a long time before the war for only 10 hours. After the war the 48-hour working week and the 8-hour day were instituted. With the increasing capacity of technique the working time was shortened, without any damage to humanity (with the exception of rendering the double shift possible). I therefore believe that the 40-hour week must come, and that it cannot be a mistake to introduce it at present, because it would bring work again to many millions of unemployed and production to us.

Of course, it would have to be internationally introduced. I repeat again that I am not here to create propaganda for the 40-hour week. This question will have to be decided at the World Economic Conference.

I am convinced from the evidence contained in the statistics that we have too many spindles in the world, and that we produce too much. The obvious consequence is that either spindles must be destroyed, which might be difficult to carry out, or one must reduce the production and therefore working hours.

I agree completely with His Excellency Wahab Pacha that we cannot avoid the putting up of new spindles in countries which have not yet an industry. This I have also stressed in my written report. This point is, in addition, one of the chief motives why I assert that we must create order out of the chaos and ration the trade that is left to us.

Mr. Mills is of the opinion that under-consumption is the cause of the crisis, and not over-production. Even here we agree, and are only quarrelling as to whether the straw tube should be on one side of the mouth or the other. In a country which keeps up normal production, this normal production, on account of lesser consumption, becomes over-production. We are not yet able to regulate consumption. Therefore, nothing else remains but to regulate the production.

Mr. Shimada said that Japan was the *enfant terrible* of the cotton industry. There are *enfants terribles* which one must admire. I have expressed my admiration for Japan, not only in my written report but also in my preliminary address. There is almost a certain envy in me, that I myself cannot be the representative of such an *enfant terrible* as Japan.

Under certain conditions one also fears such *enfants terribles* One can only hope that even children will become older with time, and so be able to understand better the older generation. But as long as one fears them nothing remains but to close the door for one's own protection, and therefore you cannot expect that the customs restrictions and aggravations will be removed. If complaints are levied against Japan because of her low prices, I would like to express the opinion that Japan's victory march into the export trade is due less to her lower prices than the higher prices offered by her older-established competitors, and that is the main reason why everybody complains about Japan and regards her as an *enfant terrible.*"

The CHAIRMAN: It is very difficult to come to a conclusion, because opinions have been variably expressed. It is difficult to get a resolution which would be passed unanimously.

Mr. SHIMADA (Japan) asked that the words "double shifts" be eliminated from any resolution submitted to Congress on the closing day.

Mr. T. DRIVER (England): I should like to enquire whether the resolution will also relate to the subjects dealt with in Mr. Catterall's paper.

The CHAIRMAN: Mr. Catterall's paper will be dealt with later.

There being no further discussion or questions, the delegates proceeded to deal with the next subject

INTERNATIONAL CURTAILMENT OF YARN PRODUCTION

The CHAIRMAN called upon the General Secretary, Mr N S Pearse, to make a statement

Mr N S PEARSE reminded the delegates that at the last meeting of the International Committee a resolution was passed dealing with the question of over-production in the spinning mills The resolution read as follows —

> "That as a first step towards bringing spinning production in conformity with demand, the Committee unanimously recommends that all members of the affiliated associations should close their mills for one week at the earliest possible moment during the month of April"

Mr N S Pearse then gave the following reports from the various associations —

Austria reported that its industry had been subject for several years to certain agreements which control in a quota form the amount of cotton yarn to be produced for the home market According to these agreements no spinner is allowed to sell in the home market more than a certain percentage of the total quantity of yarn produced

This percentage is controlled by the actual demand At the present time the actual production of the Austrian spinning mills is no more than 45 per cent of the normal full time production on one shift

Because of these facts it was not thought advisable to introduce a further curtailment of one week during the month of April, 1933, At the same time they were of the opinion that such a measure would have no real influence upon the market situation for the reason that it only amounted to a 2 per cent curtailment Nevertheless, they were prepared in the interests of the solidarity of the International Federation and affiliated associations to adopt the resolution for their own affiliated firms for one week during the month of April 1933, provided that all other affiliated associations adopted a similar measure

Belgium reported that the entire spinning and weaving sections worked one week short time during April as a result of the resolution adopted by the International Cotton Committee

Czecho-Slovakia stated that although, in accordance with the working arrangement as at present set out by the cartel, the reduction in output has been 40 per cent of full time production since November, 1932, the Czecho-Slovakian Association resolved to adopt the resolution formulated by the International Federation to stop their mills for one week during the month of April, 1933, provided that the spinning mills of the other affiliated European countries put into force this same resolution

The Chinese Cotton Millowners' Association stated in a cable that for a month commencing April 22, their members would curtail production by 23 per cent

England was working approximately 30 to 35 per cent of short time, but on an unorganized basis The ballot of the Master Cotton Spinners' Federation, asking for a week's stoppage, failed to obtain the requisite percentage of votes in favour of a further organized stoppage, but the majority of their mills shut down entirely during Easter week

Finland stated that the month of April, being the best month during the spring season from a business point of view, was not suitable for further curtailment, they were then (in March) only working four or five days per week They proposed to stop for seven days during the month of June instead of the suggested week in April

France The French Association stated that in order to conform to the recognized customs of the industry, a majority of 80 per cent of their members would have to be obtained before the proposed stoppage could be put into force As there did not appear to be any possibility of such a majority being obtained, they regretted that, under the circumstances, it was not possible for them further to support the recommendation of the International Committee, although they were already working some unorganized short time

Germany replied stating that approximately 20 to 25 per cent of voluntary curtailment of production was being exercised and they thought that, to make a short-time movement such as the one proposed a success, it would be necessary for all affiliated countries to be in agreement with the resolution, and in view of the information to hand this did not appear to be the case They further stated that during the course of the summer the German mills would be compelled by law to close for one week's holiday

Italy stated that the Italian spinners had already reduced production by more than 20 per cent They made the offer that, should it be possible to come to a decision, the Italian spinners would prefer to close during the month of August They did not see how a practical realization of the proposal was possible, if all the spinners throughout the world would not adhere to the resolution

Japan replied that the industry was already working on an organized curtailment schedule of 20 per cent, according to their current agreement, and they were unable to effect further curtailment

Sweden stated that during the last few months, they had been forced to adopt more extensive measures for the curtailment of output and it seemed probable that these restrictions would have to be further extended in the near future Under these circumstances, although in full sympathy with the efforts of the International Federation, they had nevertheless to refrain from adopting the recommendations for the present

Switzerland stated that owing to the protracted negotiations which would be necessary before such a stoppage could take place in that country, it would be impossible for members to close their mills during April Although they were not in a position to adopt the resolution they welcomed every step towards bringing spinning production into conformity with demand

Mr FRED MILLS (England then said that the recommendation of the International Committee was very largely adopted in England

There was no further discussion on this subject

The Congress then dealt with the paper on ' The Effect of Futures Trading upon the Cotton and the Cotton Yarn Market "

The CHAIRMAN said that the question of the cotton futures market had been brought up on various occasions, but it had been deemed necessary to bring it up again He said that all the people who had studied the question of the futures market would say that it functioned for the benefit of the trade That was very well known "I hope ' continued the Chairman "that you will give your attention to the papers that have been written and submitted to this Congress to-day which go into the question very fully and in full detail

Mr G R SIEDENBURG (U S A in introducing his paper said "I would like to say a few words as to what happened when the cotton futures exchanges were recently closed in many countries" He went on to remind the delegates that before the exchanges were closed American cotton in New York was 6½ cents, but after the exchanges had been closed and were re-opened the price had advanced to 8¼ cents As a result of the exchanges being closed, there was no way of ascertaining whether the sales at 8¼ cents were recorded as transactions or were the consensus of world market opinion " The trade," said Mr Siedenburg, ' was quickly at sea" There were wide fluctuations in prices, which interfered with the trade They all knew that trade in any commodity became very difficult if they did not know what the real value of a commodity was

"I believe," continued Mr Siedenburg, "that the futures exchanges perform the services which give to the world the exact price at which each commodity can be bought or sold This makes it much easier for the consumers and the sellers of cotton to do their business It also makes it easier for advances to be made by the banks

"Generally there has always been a certain amount of opposition to going into the question of the futures markets This opposition, I think, has its reason in the feeling that the futures markets make it possible to speculate Now, generally speaking, I do not think there is any commercial transaction which cannot be used for speculation I think that the futures market should not be mentioned particularly, because it gives the merchant the opportunity to speculate

" No commercial transaction is exempt from abuses," declared the speaker " I think that the particular opposition which I have mentioned will continue no longer "

Mr Siedenburg concluded by saying he hoped the delegates would give their attention to the question of the futures market "I believe you will find that the market performs a service to the trade which all should recognize"

Mr NORMAN L CAPPEL (President of the Liverpool Cotton Association) then followed and said "I should first of all like to take this opportunity of thanking you for having invited us here as guests and for having given us this opportunity of explaining and putting forward the advantages of the Cotton Futures Market I have little to add to my paper and to what Mr Siedenburg has already said but I should like to quote from a paper which has been written on another subject by one of your prominent members and which I think, provides the best possible testimony to the value of the Cotton Futures Market I refer to a paragraph in the paper on Trade Restrictions by Mr W H Catterall, President of the Federation of Master Cotton Spinners Associations, which, if you will permit me I should like to read because it is very relative to this subject

'Mr Catterall says 'Variable exchanges are no very serious handicap unless we are prevented from hedging against exchange fluctuations All we need is that the currency exchange futures market should work as freely as the Cotton Futures Market We should all like cotton prices to be absolutely stable but no import or export contract is ever prevented by fear of fluctuations in the price of raw cotton The Cotton Futures Market provides adequate safeguard to both the buyer and the seller of cotton or cotton goods It would be suicidal to us to ask our Governments to close the Cotton Futures Markets Contracts for more than a day or so ahead would be impossible Exchange restrictions are comparable with the closing of the Cotton Futures Market, and the Government that does so, out of consideration for their creditors signs a death-warrant upon industry and trade '

"And that is what would happen if the Cotton Futures Markets were closed," said Mr Cappel

"I should like to add a word to what Mr Siedenburg has said on the subject of speculation," went on Mr Cappel "The first great speculator was Adam when he tried the apple, and ever since there have been speculators, and if you are going to speculate the Futures Markets provide the best means because it is possible to go in or out at any moment At the same time, the speculator in these markets performs a useful function to the community because he helps to keep the market broad and is often the counter party for hedging business"

Mr Cappel further stated that he therefore considered it wrong that it should be possible in some countries to plead the Gaming Act successfully against operations in Cotton Futures "Certainly on the part of spinners or those engaged in the trade and, I submit, on the part of speculators, I would ask you, whenever the opportunity arises, to use your influence in those countries where the Gaming Act can be applied to Futures transactions, to get the law altered Not only do such laws, which were made many years ago and before present conditions obtained, give opportunities to unscrupulous people, but they prevent commission houses and brokers granting the same credits and facilities which they are able to give in countries where they can sue successfully in a Court of Law and where Futures are rightly looked upon as legitimate trading"

The Chairman said that every effort should be made to persuade the Governments of the countries concerned to alter the gaming laws

Mr HEINRICH WESTERSCHULTE (Germany), representing the International Chamber of Commerce) said he wished to express the thanks of the International Chamber of Commerce for being asked to submit a paper on "The Effects of the Futures Trading in Cotton on the Raw Cotton and the Cotton Goods Markets"

"I think everything I wish to say has been stated in my paper Furthermore, both Mr Siedenburg and Mr Cappel have fully dealt with the question" He added that the International Chamber of Commerce would continue its work in bringing about the necessary improvements in the working of the futures contract in the different countries

The Chairman suggested that the Congress should pass a resolution pressing for the Governments to abolish any old laws by which the Gaming Act could be pleaded in relation to cotton and indeed to all commodity futures markets

YOUSSEF NAHAS BEY (Egypt) "I am in entire agreement on the necessity of securing futures contracts, and also on the necessity of speculation

"I most certainly admit that the admission to the exchange of the contracts of certain people, who might wish to make profit out of the situation, should not be forbidden, because these people have the requisite experience to enable them to apply themselves to the transactions But I take the liberty to say that there is a certain category of persons to whom this sort of transaction should be forbidden as far as possible—this is the grower, who should not become involved in such transactions

"If speculation is necessary, certain restrictions should be placed upon it, because the intervention on the transactions of the exchange of persons not qualified may mean for them that they themselves will be drawn into the transactions to the possible neglect of their ordinary business, they will risk their fortunes in them and upset the economic stability of the country where they operate, when these ills might become general

"Moreover, by their untimely intervention in the markets, these persons may hinder the regular course of business Consequently, if certain countries wished to forbid gambling in futures contracts, they had this major pretext of shutting out certain categories of persons who ought not to indulge in such transactions

"Nevertheless, I am of the opinion that if the transactions of the exchanges are to be made illicit, certain restrictions must be placed on them, certain limits defined, in order to put a curb on the drawing-in of the masses to the market speculations A service would thus be rendered to the cotton market itself, for the presence of an inexperienced element falsifies the prices, and, as a result, interferes with the normal course of business."

Dr. **ZUCKER** (Czecho-Slovakia): "We are agreed that on that point all are in favour of the futures markets. Spinners consuming 50 per cent. of the cotton of the world are using the cotton futures markets.

Mr. **ARNO S. PEARSE**: "I am stressing the point that in Asia they do not use the futures market. The cotton merchant there uses it less than in any other part of the world."

Dr. **ZUCKER** (Czecho-Slovakia): "Whilst most of us agree with all that has been said in favour of the futures market in cotton, it might be of great interest to us European spinners to know why the whole of the Asiatic spinners—who are in a more profitable position than we are, and representing almost 50 per cent. of the trade—persist in making no use whatever of the cotton futures market."

Mr. G. **BOYAGIS** (India): "Speaking about the use of the cotton futures market by spinners, I would like to ask the questions: Do the spinners of the world use the cotton futures market, and do the manufacturers go along to the finished article without any hedge against it?"

"In India," continued Mr. Boyagis, "I have always stressed to the manufacturers that they were running into a big gamble by dealing in cotton or finished goods without having hedges."

He went on to say that he had done all he could in India to show that the use of the cotton futures markets was the very opposite to gambling The use of the futures market was being taken up very slowly in India. "Up to five years ago, I think, or perhaps seven years ago, buying 'on call' in India was unknown." The practice, however, was growing very rapidly. Similarly, spinners were using the futures market to hedge their raw cotton interests.

"I might say," continued Mr. Boyagis, "that many losses in your spinning industry, as far as is known in India, have been brought about by spinners not using the futures market. Had they used the futures markets more they would not have been in such a parlous state to-day." He concluded by again stating that the practice of dealing in futures in India was growing. "As to Japan, perhaps our Japanese colleagues will tell us something."

Mr. **ROGER SEYRIG** (France): "We have just heard a kind of hymn in praise of speculation, but many of us are not so enthusiastic on the subject. Of course 23 million bales, in passing from hand to hand, form such a great quantity that large and active markets are a necessity, but the number of transactions in cotton bales is so much greater than the number really handled from sellers to buyers that the importance of gambling by persons who have nothing to do with the cotton trade or the industry is quite obvious, and it is of such great proportions that it goes straight against the interests of normal business.

"We wish to do away with pure gambling, and the laws of some countries are indeed a help against gambling, but we are of the opinion that it should be done without interfering with normal trade for which the use of "futures" may be a necessity."

The CHAIRMAN: "Speculation is being carried on by the people who are not in the cotton trade."

The resolution was then read to the delegates in French, German and English as follows:—

FUTURES MARKETS

> "Realizing the necessity for the existence of cotton futures markets in the interests of the cotton industry of the world, this Congress, whilst deprecating their use as a means of gambling, is of opinion that the laws governing these markets should be revised in such a manner as to avoid unscrupulous debtors availing themselves of the same, with a view to escaping liabilities incurred under a *futures contract*."*

The discussion on the first three papers, viz.: "The Causes of the Depression in the World's Cotton Industry," "International Curtailment of Yarn Production," and "The Effect of Futures Trading upon the Cotton and the Cotton Yarn Market," had taken up the whole of the morning session, and there was no time left to discuss the other items on the morning's agenda, viz.: "Trade and Currency Restrictions," "Limitation of Credits," "Protection of Spinners from Financial Losses Due to Failure of Cotton Exporters," and "Alterations to Statutes."

It was decided that the above subjects should be dealt with at the afternoon session in the order named.

The Chairman then adjourned the Congress until 2.30 in the afternoon.

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* See resolution adopted on June 10 by the final session of Congress at Carlsbad.

SECOND DAY'S PROCEEDINGS (Afternoon Session)

Thursday, June 8th, 1933. 2.30 *p.m*

Dr. MYLIUS (Italy) continued in the chair, and he called upon Mr. W. H. CATTERALL (England), who had prepared the paper "Trade and Currency Restrictions," to make a statement.

Mr. Catterall said: "In introducing this paper, responsibility for which is vested in the Executive of the English Federation of Master Cotton Spinners' Associations, I wish to confine myself mainly to factors that have arisen since its preparation.

"The views contained in the paper, for which I now ask your earnest consideration, emphasize the prime importance of monetary reliefs to remedy the condition of industry and trade by way of controlled currency and credit expansion. In this connection I was particularly struck by a pronouncement, on 15th May of this year, given by the Financial Commissioner of the Imperial Japanese Government in London, in which he said:—

"'It is worthy of note that a change in Japan's monetary policy from one of severe deflation to a policy permitting freer currency circulation and cheap and abundant supplies of money has done much to relieve the pressure of the internal economic situation, a fact which gives rise to the belief that the adoption of such monetary principles universally over a long period, would greatly contribute to the world's economic resuscitation, and in this respect the international co-operation of monetary authorities is highly desirable.'

"May I here remark that there is nothing conjectural in this reference to the unmistakeable benefits that have accrued to the industry and trade of Japan.

"I would now direct your attention to recent happenings in the United States of America. The departure of that country from the old dollar-gold standard, on the 19th April of the present year, is a factor of supreme importance which occurred subsequently to the preparation of this paper, where you will see reference to the dominant influence of United States monetary management not only upon domestic prices but also upon world prices.

"President Roosevelt, backed by large majorities in the House of Representatives, has taken active steps to achieve the raising of prices. The Farm Relief Bill, which was signed by the President, and became law on the 12th May, makes provision for increased farm prices, refinancing of farm mortgages, expansion of Federal Reserve credit up to 3,000 million dollars, issuance of corresponding currency, devaluation of gold, payment of part of the war debts in silver and coinage of silver. The Industry Recovery Bill now under consideration is designed to the same end. The repeal of the gold clause in all public and private obligations is now also enacted.

"I would here refer to President Roosevelt's remarks upon these measures in his radio address of 7th May, when he said:—

"'The Administration has the definite objective of raising commodity prices to such an extent that those who borrowed money will, in the average, be able to repay that money in the same kind of dollar which they borrowed. We do not seek to let them get such a cheap dollar that they will be able to pay back a great deal less than they borrowed. In other words, we seek to correct a wrong and not to create another wrong in the opposite direction That is why powers are being given to the Administration to provide, if necessary, for an enlargement of credit to correct the existing wrong. These powers will be used when, as and if, they may be necessary to accomplish the purpose.'

"There is support for my views also in the statement issued jointly by Mr. Ramsay Macdonald, the British Prime Minister, and by President Roosevelt on 26th April of this year, who said:—

> " 'The necessity for an increase in the general level of commodity prices is recognized as primary and fundamental.
>
> " 'Central Banks should, by concerted action, provide an adequate expansion of credit, and every means should be used to get the credit thus created into circulation.
>
> " 'We must, when circumstances permit, re-establish an international monetary standard, which will operate successfully without depressing prices and avoid the repetition of the mistakes which have produced such disastrous results in the past.'

"We have all doubtless noted a great change for the better in America since the inauguration of President Roosevelt's policy," continued Mr. Catterall. "The *American Analist* weekly index of wholesale prices has risen from 80 per cent. in March, 1933, to 91 per cent. for May 16th. The people's confidence in the determination of the authorities to bring about and maintain an industrial revival has caused industrial bonds, which struck the low level of 62 per cent. in 1932, to rise to 89 per cent. And, except in those countries which still labour under a rigid gold-standard policy, beneficial results are accruing to all other countries. American policy is helping to lift the world.

"Commending the action of the President in departing from the old gold-standard, Mr. J. P. Morgan, the great financier, is reported to have said:—

> " 'It seems to me clear that the way out of the depression is to combat and overcome the deflationary forces.'

"In general, however, the old school of finance is rallying forces to oppose the policy of controlled expansion. I would therefore suggest that the industrialists of the world, and we particularly of the cotton industry, will find it to our vital interest to support those statesmen who have the enlightenment and courage to inaugurate and perpetuate the new policy.

"The same enlightenment with respect to tariffs, exchange and other restrictions, I am glad to say, is growing daily in evidence. The World Economic and Monetary Conference, which begins on 12th June, has a formidable agenda under these heads. In connection with this Conference we are all doubtless of one mind in at least one thing, i.e., that we wish to convey, by the example of our own resolutions, some encouragement to those who have the difficult task of reconciling the views of 66 nations.

"In this wide field of industrial, commercial and economic activities we have at least this qualification of being long practised in the international exchange of ideas. We can claim to be the first of this type of organization to utilize the resources of international conference as a means of solving world-wide problems. Of all industries, we claim, and quite justifiably, I believe, that we are the most internationally minded. We are also qualified, because we are closer to the source and effects of world trouble than most other industries, and, may we also respectfully say, than most politicians. No sooner does trouble commence than we have to bear the brunt of it.

"We can safely say that the world crisis is none of our own making. The world suffers from lack of ability to purchase not only our goods but everybody's goods. We are eager to work. We are technically equipped to a degree of perfection such as never before had been contemplated or seen. Responsibility does not, therefore, lie with us—the manufacturers and traders. There are barriers between our customers and ourselves; and we find them to originate in our financial and political institutions.

"May we not be excused, as principal sufferers, if we again remind our Government authorities that trade is the greatest ameliorator of the lot of mankind and that it is the essential function of Governments to foster and facilitate trade. Law that creates obstacles against those who want to buy and those who want to sell is bad law. Law that hampers trade destroys that basis of confidence and prosperity, without which no people will be content and no Government can stand secure.

"The beginnings of restored prosperity are already with us, and, largely due to the initiative of the United States of America, a period of improvement in trade, I believe, is reasonably assured. There is sufficient determination to reduce trade restrictions, in certain of the most powerful States, to warrant this belief. To work for and to encourage the continuation of this good work should be, I suggest, our unremitting concern."

"In conclusion," said Mr. Catterall, "I would draw attention to the chief features of our paper.

"Examining the several forms of trade restrictions, I have sought to reveal the underlying causes of them. As to monetary policy, I have stressed the increasing burden of debts, as prices fall, and have suggested that, if debts are ever to be repaid, then we must receive a sufficiently high level of prices for our goods to make our industrial and national money incomes adequate for debt payments. Otherwise the piecemeal debt repudiation, already experienced, will I fear spread to embrace all the major debts of the nations.

"In anticipation of this trend, I suggest the great creditor interests will find it advisable to co-operate with producers and traders in establishing an equitable price level by means of monetary expansion. It also seems, to my way of thinking, that the removal of this monetary handicap and the consequent reviving trade will greatly facilitate the abandonment of the many other forms of trade restriction."

Dr MYLIUS (the Chairman) 'I cannot follow you when you say that stabilized exchanges are not necessary You seem to say that external indexes of commodity prices will be sufficient to stabilize prices, but I am afraid we shall have to wait a long time before the wholesale commodity prices rise '

The Chairman continued that this meant inflation, and he personally was not in favour of that "Good and permanent trade will not be obtained by inflation,' declared Dr Mylius

Mr PAUL SCHLUMBERGER said that the way to get out of the difficulty trade found itself in was by monetary policy "But," continued Mr Schlumberger, "we have not the power to do it We have not the power to express our will upon France, but we can express the wish that this important question must be settled " A policy of inflation could only bring them deeper down 'We want less inflation," declared Mr Schlumberger

"It is my personal opinion, but I know we all wish, that England and the United States should give us a good example and come to an understanding In 1931 when they discussed the exchange question the £ and the dollar were on the old standard and only the exchanges of the small countries were 'off gold' If the exchanges of the small countries were not on the same standard as the dollar then commerce and trade could not proceed And if the two main currencies of the world —the £ and the dollar—were not stable, then trade was impossible "

"The dollar and the £ must be stabilized," declared Dr ZUCKER He did not think they could safeguard the gold standard again as there had been very good reasons for devaluation

"From 1927 to 1931 were the times of prosperity, when the £ was going up We were then told that England was going 'off gold' The £ became as low as the dollar What has happened now? We were always told that in the United States it is devaluation The £ and the dollar the two main currencies of the world, should be stabilized as soon as possible," concluded Dr Zucker

Mr R A de la BEAUMELIE (France) then spoke in French

I should like to say a few words on the question which has just been raised We have been told that stability of the exchange is not necessary and that it would be better to give it up While the speaker tells us that stability of the exchange is not necessary, at the same time he expresses the wish that the quotas may disappear and that tariffs may be diminished It is almost impossible to pursue these two goals at the same time

What I wish to emphasize is that instability of the exchange, and in particular that of currencies of certain great industrial countries, leads necessarily and directly to a tariff war At the present time three great industrial countries England, U S A and Japan, have abandoned the gold standard You are aware of the extent of the power which the abandonment of the gold standard has already given to the English export trade, and, in a much greater proportion to that of Japan It is obvious what this abandonment of the gold standard may lead to in the near future, regarded as a means of opening up foreign trade Now, the countries who have abandoned the gold standard are faced with the group of industrial countries of Western Europe, who, up to now, have preserved the gold standard

"What can these European countries do to defend themselves against the menace represented for them by the depreciated currency of the great foreign countries of which I have spoken? They can do two things They can as the last speaker has said, abandon the gold standard That is a solution which would not be admitted by any of the great European countries Firstly, because the majority of them have experienced inflation and have no pleasant recollections of that Moreover, there are experiments which cannot be made a second time when they have not been successful the first time One cannot re introduce them after an interval of six or eight years There are maladies of which a relapse is fatal Therefore if these countries wish to thrive, with some chance of success, against the menace of a normal competition represented by the depreciation of foreign currencies, tariffs are the only means of defence left to them

"That is why, as long as the English American and Japanese currencies are not stabilized, you cannot expect the countries which have remained on the gold standard to follow regarding quotas and tariffs any other policy than this rightful policy of self defence

"I conclude, then, by saying that, in the interests of international commerce, it is most desirable that the currencies should be stabilized—those of which I have spoken—and that this should be done at the soonest possible moment"

His Excellency AHMED ABDEL WAHAB PACHA (Egypt) said "I must thank Mr Catterall for the valuable attempt to throw light on to some of the questions at issue It is really a great effort on his part I should like to agree with him as to the necessity of making tariffs within reasonable limits I should like also to agree with him as to the necessity of abolishing as soon as possible such trade restrictions as quotas exchange restrictions boycotts and the like, but at the same time I should like to express my entire disagreement with him on the question of currencies

"Any solution to the problem of currency must aim at obtaining two objects The first one was stabilization Without this stabilization of currency, the present state of trade and the lack of confidence in the world is bound to continue

"We must know where we are with regard to currency and there is no other way," emphasized His Excellency

"The second object is one which is to be discussed at the World Economic Conference in London, and is the raising of the general level of prices of all raw materials Prices have gone down to the limit, which has brought them lower than what they were long before the War

"We must therefore aim at stabilization and we should therefore aim at raising the general level of prices," continued His Excellency

"If any of the gentlemen here can tell us of a standard on which we can rely, and which will be a stable standard—a proper measure of value—we are ready to welcome any suggestions he has to make.

"We are ready to examine any suggestion. So far as anybody can tell us, there is no better standard than gold."

His Excellency then quoted from a reply which Mr. Neville Chamberlain, the British Chancellor of the Exchequer, gave in the British Parliament only a week ago, in respect of the question of currencies: "They wanted to protect the currencies of the world from fluctuations having no relation to their intrinsic value. So far as he has been able to ascertain, there was only one standard formula which would restore confidence and that was the gold standard. It was the only standard which could serve all nations as a whole. Before, however, they could go back to the gold standard, they must be satisfied that practical steps have been taken, and certain that the gold standard would work and would not be subject to the difficulties which had to be faced not so long ago."

His Excellency concluded by saying that he earnestly pleaded that the question was one which the Conference should give very serious attention. As the British Chancellor of the Exchequer had said, we must return to the gold standard as the one which ensured the most confidence.

Professor Dr. J. WISSELINK (Holland) said: "The ably written paper of Mr. Catterall touches very many points, but as time does not allow me to go into more of them, I will confine myself to the main one. This main point is where the paper proposes (p. 13) that the International Federation should lay out the principles of a new monetary system, which in its ultimate form might be called the goods standard.

"Being a director of the Cotton Trade Statistical Bureau of the Dutch Industry, I think I have the interests of the cotton industry sufficiently at heart, entitling me to ask the following question:—

"Reading through the paper I see that it derives its arguments for taking the very great risks to alter the monetary system mainly from the position in which the cotton industry finds itself. Now I doubt very much if the goods standard for our money would in the end really help the European cotton industries and especially the West-European exporting industries—but I will deal with that question presently. I take the liberty of asking you whether, for the sake of one branch of industry only, we should plunge our countries into something which, notwithstanding its good points, may in practice be nothing less than a big adventure. The practical difficulties, and especially those of the change-over, are to my consideration enormous, and if it fails we should bring about a catastrophe. But even if one wished to take the risks for one's own industry (a risk which I certainly would not take for the Dutch cotton industry) there is the whole of the nation to be thought of.

"I have heard with much pleasure the remarks of the other speakers, with which I agree in the main, and especially the remarks which Monsieur Brasseur gave in his memorandum and which were read this morning by the Chairman. I think with Monsieur

Brasseur that the question of such an all-important problem as the changing-over from one monetary system to another should be left to the World Economic Conference in London

" However, I should like to add one more remark to those made by Monsieur Brasseur The point that I wish to bring to the fore is the utter impossibility of making such a big alteration now in the midst of a severe depression, and therefore, the inadvisability of adopting a resolution to that effect

" I shall be one of the last to deny that our gold standard monetary system is without faults—though I doubt if a system has been found that gives better total results in practical life Not on paper, but in practical life But certain faults admitted, and even if we were to give the goods standard a trial, we must not do it now

" You can compare the monetary system with the engine of a liner Now, nobody will deny that our business liner is in a storm or even in a hurricane, and, to make matters worse, in a sea with many social and economic rocks Suppose the captain is not content with the engines which are not developing sufficient power, and that he wants one that, in his consideration, will do better Do you for a moment suppose that with his ship in such a dangerous position he would stop the engines and have them removed? If the engines cease to run the ship cannot be steered and will be wrecked No captain would do such a thing If he wants to have new engines put in, he will wait until his ship is in the harbour or at least in calm water

" The same applies to such an all important problem as creating a new monetary system If such a change must be made we must at least wait for a relatively quiet period, say the middle of the upward curve of the business cycle What we need now most of all is a restoration of trust and credit and the stabilization of currencies on a gold basis (I agree quite with what Mr Caspar Jenny said this morning) I do not mind at how low or high a level one stabilizes, but a stabilization we must have, and the sooner the better, even if the gold standard has its defects A big monetary change-over now, to a system which people in general do not understand, would have a detrimental psychological effect *Under the present conditions* it would knock the bottom out of everything and would in my consideration be nothing less than the last blow to our economic life and to international trade in particular

" Now, just one more short remark, Mr Chairman, as to whether the question of the introduction of the goods standard would help our European cotton industries

" It might give a more stable price-level here in Europe, if one succeeded in overcoming the difficulties of putting it into practice It might even create a somewhat greater demand for cotton goods in the overseas markets, and especially in the tropical countries But it would certainly not do away with the big difference in costs of production between Japan and China and England and Holland This difference is mainly a result of the fact that the Eastern peoples have many fewer wants than Europeans Even with a good income they have relatively few requirements They use less goods and services and now, whether you measure the value of these goods and services in gold money or in goods money, it makes no difference at all The fact remains that they want less and use less as a result of climate, biological and racial factors, cultural level and so on Of course these wants increase in the long run, but not a bit faster whether you measure the costs of them in gold or in goods You cannot get away from these differences and although to a certain extent the demand for cotton goods in tropical markets might arise, these goods would be sold by those countries which produce the cheapest and those are the Eastern countries"

Mr T DRIVER (England) said "As a contribution to the discussion upon the subject of trade and currency restrictions, I desire to say that our thought should be to bend our efforts to the problem of constructive relief and cure Whatever the desires have been of those few people who control the quantity of money and credit allowed by them, it is certainly basically the fundamental, in my opinion, of our trade troubles

Our producers are no less capable of producing their goods in quantity and quality than they were before the War The goods to-day, with the same currency and credit restrictions prevailing, can only be taken up by the people of the world in the quantity that they have the money to buy them with The world is short of goods and would buy if there were a freer flow of money and credit The many additional millions of the people of the world urgently desire to work, but the diminished and forced restriction of money and credit prevented them

' I do not intend to discuss the effects and remedies to deal with our trade as we find it to-day, in its lessened total volume, because these would dissolve in the fullness of demand by the unknown millions of potential buyers If only those who have the power would again allow it to be possible for the world to have the use of such a quantity of currency and credit which would allow industry to get to work, and through work, wages and work margins, to revitalize buying power, which is latent and lessened at present, then our difficulties would decrease"

Mr Driver further stated that as the World Economic Conference opened in London the following week (June 12th), it allowed a splendid opportunity to send from the International Cotton Congress a resolution on Saturday requesting that the basic item should be one of instruction to those in control of currency and credit facilities to do their part in a world settlement and a speedy restoration to happiness and work

"I am not concerned with legislation for less work or the present volume of work," concluded Mr Driver, "but with a development and expansion of production which would be possible if this primary cause of currency and credit restriction was brought into line so that it did its part in world restoration of buying and work power What is desirable is the establishment of an exchange parity between nations such as we had in pre-war times, but the immediate necessity of more currency and credit being in circulation is very important"

Mr E E CANNEY (England) stated that he had listened with close attention to the trend of the discussion, and he respectfully urged that the paper submitted by the English Master Cotton Spinners' Federation should receive just as careful consideration for detail, as the detail had had care in preparation. Adverse criticism had centred upon the English Federation's remarks regarding stabilization, which he ventured to say, were not being exactly interpreted.

"Stability of exchanges is a great convenience, but not a bit of good if it means the destruction of the countries submitting to stability. We had a rigid stability of exchanges down to 1931 and the whole world falling to ruin. By keeping an artificial stability of exchange we have lost the stability which everyone would like to see. If you try to tie your currency rigidly to gold and the gold price of commodities is definitely downwards then the price level in your country must be downward. You must then get into hopeless financial difficulties."

If they were going to decide on permanent exchanges, then the whole world must conduct itself to that end. "There must be no gold hoarding," emphasized Mr. Canney, and he asked at which level must each country stabilize.

"The English Federation would welcome stabilization upon a practical money basis but objects to the sacrifice of trade recovery and trade stability to the aim of stabilized exchanges. They would not subordinate the essentials to the convenience. We all know by experience that artificially stabilized exchanges, at such parities as the several countries cannot support, means inevitable breakdown of the exchanges. Stabilized sterling exchanges on the old gold standard forced Great Britain off the gold standard in September, 1931. The only permanently practical basis for stability in the exchange parities is the natural one; and that is set by the relative trade and debt circumstances of the several countries. Anything artificial is bound in the long run to defeat its own end and produce unstable exchanges."

Mr. Canney then said that the insistence on stable exchanges necessarily involved arguments about the relative parities—arguments that could only lead to sore heads. The franc, once at 4.5 grains of gold, was now only 0.9 grains of gold, and if it were restored, France would be in a terrible position. Their French colleagues knew quite well that the old franc parities would ruin their country. That consideration applied to all cases.

"If England had not been driven off the gold standard, she would have been obliterated by this time. Are we not making fetishes of exchange stability and of the gold standard? I find there are really few people who understand the meaning of the gold standard.

"I therefore assure you that, in our country, we now look for monetary stability not on gold but on commodities. In this paper by the English Federation there has been an attempt made to suggest what the elementary principles of monetary control should be from the point of view of industry and trade. The Federation is not so much concerned to argue about gold but it is concerned about certain elementary and fundamental considerations. It is asking for fair play."

He reminded the delegates that England had been suffering from the depression not for two years but for over ten years

His Excellency Ahmed Abdel Wahab Pacha has quoted Mr Neville Chamberlain and has asked what alternative can there be to gold?

What does Mr Reginald McKenna once Chancellor of the Exchequer and now for many years the Chairman of the Midland Bank say? Reading from the Midland Bank *Monthly Review* dated January—February 1933 he says The true standard of stability is what currency will buy not of gold but of all commodities which enter into daily use in production and consumption

I have here much available material in enlargement of that statement but this brief answer should suffice

It has also been said that without the gold standard and stabilized exchanges there can be no confidence for trade I would venture to say that these very factors have been responsible for destroying international trade Who may I ask now really trusts the gold standard? How many countries still on the gold standard show a certain confidence in their gold standard?

There are a few on the present gold standard but they do not know whether they are going to be on it much longer

The larger consideration of what essential monetary system that would permit world trade recovery I suggest is the primary consideration of this Conference The English Federation has attempted to lay down the bed rock principles of a fair monetary system and asks your collaboration in assuring adherence to them on the part of the monetary authorities The English Federation asks that the producing and debtor interests have fair play out of the control of the money quantity When the world industries are relieved of the present monetary restrictions whatever is permanently practicable in stabilizing the exchanges will naturally follow

Mr Canney concluded by repeating the statement of Mr Reginald McKenna with respect to the reliable and convenient alternative to the gold standard The true standard of stability is what currency will buy not of gold but of all commodities which enter into daily use in production and consumption

The CHAIRMAN said that regarding the statement of Mr Canney that countries had been driven down by stability they might have been driven down by the relationships between gold and the £ sterling Stabilization is necessary said Dr Mylius He suggested that the Committee should draft a suitable resolution to forward to the World's Economic and Monetary Conference

Mr T DRIVER (England) Would that require that the franc should be restored to its former figure?

The CHAIRMAN No There would be no change It means stability of exchange

Mr FRED MILLS (England) Any suggestions of that character could be altered at the final session of the Congress on Saturday when the resolution will come forward in its final form He then moved that a resolution should be framed which was duly seconded

Mr FRED HOLROYD (England) then addressed the delegates and said it was not his intention to talk about the causes of the world depression or to prescribe any remedies for its alleviation "I am here and I am speaking now more in the position of a delegate than anything else

"I do hope," said Mr Holroyd, "that we shall come to some sort of unanimous resolution on this very important subject, but I think that is almost impossible

"I suggest that a special committee should be formed in order that a resolution may be drawn up" Mr Holroyd then went on to say that he challenged the statements that all the blame should be put down to England and U S A

He went on to say that other countries had adopted protective measures, but when England decided to take the same steps they were criticized "It is all wrong," declared Mr Holroyd "I am a believer in Free Trade I have been a Free Trader all my life and am a Free Trader now I have said before that if my father knew how I had voted at the last Parliamentary election in England, he would turn in his grave I am still for Free Trade"

"We in England were followers of Free Trade for over 70 years We tried to teach the world what was the real basis for the exchange of international commodities, and none of you would have it We could go on no longer, and consequently we started protective measures Not to do us any good, but to teach the other nations how fatal such measures were!'

"Our French, German and Dutch friends have done it and in order to release the burden on our shoulders we had to do the same

"What does it all mean?' asked Mr Holroyd "It means that we are in Congress here to-day but we are representing very many nations We, every one of us, desire to see our trade rehabilitated, to be more successful and more profitable than it is at present

"Cannot we then formulate some sort of unanimous resolution that will bring this about?"

Mr Holroyd went on to point out that nations had different desires, different aspirations and different outlooks They would have to be brought closer together if they were to see any advance

"If we cannot go forward one hundred yards, then let us go forward ten yards," said Mr Holroyd

He concluded by appealing to the Congress to send a unanimous resolution to the World Economic Conference in London

The Congress went on to consider the next subject

LIMITATION OF CREDITS

The General Secretary introduced the subject by explaining to the Congress that the International Wool Textile Organization had asked the International Cotton Federation to study the question of credits, and if possible to arrive at some resolution limiting credits in the sale of cotton cloth Information of the various usages in the trade had been collected from affiliated countries and had been laid before the delegates

The CHAIRMAN: "Does anybody wish to discuss this matter?"

Mr. MAURICE DUBRULLE (International Wool Textile Organization) said that it was a very important question to textile organizations throughout the world. He went on to say that "Some countries gave 120 days credit, other nations 80 days, and sometimes they gave 18 months. I think it would be better if it is at all possible to come to some international agreement on the question, so that all nations would have the same terms of payment. It is absolutely necessary to have the same terms in all the textile trades." He concluded by suggesting that the Congress should pass a similar resolution to that adopted by the International Wool Textile Organization.

The CHAIRMAN: "Is it your opinion that we should come to such an agreement?"

Mr. HOLROYD (England): "It would be information to us if we could get the different terms of credit in the trade. What terms are given in the various trades of the world?"

The CHAIRMAN said that if that information had been obtained they could come to an agreement without appointing a special committee to discuss it.

M. DUBRULLE finally undertook to draft a suitable resolution for submission to Congress at Carlsbad.

PROTECTION OF SPINNERS FROM FINANCIAL LOSS DUE TO THE FAILURE OF COTTON EXPORTERS.

Mr. GABR. HOFGAARD (Norway) introduced the subject by stating that the Norwegian spinners had suffered losses owing to American cotton exporters becoming bankrupt, and as he wished to have the matter discussed by the other countries, he had prepared his paper, and hoped that the matter would be given some attention in the near future.

The CHAIRMAN said he thought that no alteration in the method of buying cotton was possible without co-operation with the exporting associations in America. He did not think that the cotton sellers on the other side of the water would easily agree to sell their cotton on the terms suggested by Mr. Hofgaard.

His Excellency AHMED ABDEL WAHAB PACHA (Egypt) said that there were two sides to the question. "What about the exporters?" he asked. "If you are thinking of protecting the spinner from the failures of exporters, don't you think it fair to protect the exporters from the failures of spinners?"

This ended the discussion on this subject.

ALTERATIONS TO STATUTES.

The General Secretary submitted various alterations to the statutes governing the International Cotton Federation to the Congress.

The CHAIRMAN asked if there were any questions, and, there being none, the alterations to the statutes were approved.

The meeting then terminated and was followed immediately by the session dealing with Technical Subjects.

TECHNICAL SUBJECTS

The Chairman of this Session was Mr CASPAR JENNY (Switzerland), who in his remarks, said:—

' In opening the Congress session upon technical matters I have the impression that it is perhaps useful to say a few words about certain ideas prevailing on technical progress. Very many people think that a good deal of the world's crisis is due to the enormous technical progress which has been achieved, especially since the War. You all have heard of the definition 'technocracy,' which has become a slang expression in the United States, and connected with it the anxiety that more and more workers will be thrown out of work through technical progress. There is no doubt that certain exaggerations of mechanization and rationalization have occurred, but I wish to draw your attention to similar facts a hundred and twenty years ago when hand-spinning had been replaced by the mule and the hand-loom by the power loom.

' Later on, from time to time, in other industries, similar improvements led to the same conflicts in the cotton industry during the first and second quarters of the nineteenth century. One thing is true: through the improvement of machinery for the production of goods for direct consumption, those machines could also be worked in countries where labour was not at all accustomed to industrial work. But all these countries need, through this process, more and more the products of our machine producing industries, which cannot easily be transferred to these countries. Since the introduction of machinery the production *per capita* employed in every industry has been, from time to time, improved, and in certain industries mechanization has reached a point where it will be impossible to improve things further, but, in spite of these almost enormous improvements every year, more and more people were employed in factories right up to 1927.

" We must not forget that, owing to the reduction in working hours, more females endeavoured to earn a livelihood in the factories. There is no doubt that technical progress may lead to very critical situations in certain industries, and I will give you an example which, to my mind, is quite possible, but I sincerely hope will never happen. What would happen to our industry should it ever be possible to produce a suitable artificial-silk cloth without spinning and weaving, something on the system of the manufacture of paper? That would indeed be a catastrophe for the whole of the cotton spinning and weaving industry, but, on the other hand, would create a great deal of work for the textile machinists. But improvements of such a revolutionary character do not come suddenly. The introduction of new inventions into actual practice is comparatively slow, and as a rule the introduction of a new idea takes one or two decades instead of years before being actually applied to industry.

" Over-rationalization and mechanization in recent years has been mainly due to the fact that labour obstinately resisted reductions in wages in countries where it was desirable that they should be reduced. The employer has been compelled to try and balance his income by means of labour-saving machinery. He could not afford to pay the high wages, social charges, and for the welfare schemes, etc., on a much higher basis than was justified by the prices he obtained for his products The introduction of labour saving machinery has been mainly due to the policy of the trade unions But the introduction of such improvements was still far more an economic question than a technical question No employer will improve his machinery if it does not pay It is equally true that, owing to nationalism, tariff walls and trade restrictions in Europe, many plants are lying idle which, with a better political situation, could be working at full time It is not the inventor nor the engineers who have brought the world to such a terrible situation we are at present passing through The technologists have done an enormous amount of good to the world They are convinced that the harm the technical improvements of recent years have brought about can be overcome easily when the politicians who have brought the world economy into such a terrible state of affairs find a way to reasonable co operation freer trade and common sense

NEW MACHINERY AND NEW PROCESSES

The CHAIRMAN drew the delegates' attention to the very valuable paper by Mr Frank Nasmith He regretted that Mr Nasmith was not present, owing to ill-health, and he asked if there were any delegates who desired to make any remarks on the paper

No questions were asked and the Congress then considered the next subjects

RESEARCH ON MERCERIZATION

DETERMINATION OF COMBING VALUE OF COTTON YARNS

THE BEHAVIOUR OF COTTONS OF VARIOUS ORIGINS UNDER DEFINITE SWELLING PROCESSES

Dr W SIEBER then gave a resume of the first paper and addressed the Congress at some length

Dr PICKARD (England) said that with regard to the paper on "Mercerization and Steeping" there was one technical point of commercial interest which he thought should be put in the report of the Congress It was regarding the various laboratory methods which were used on the Continent and sometimes in England, to determine what was called the "Degree of Mercerization" The Degree of Mercerization as determined by these methods could not yet, in his opinion, be correlated with the technical quality of the mercerization for example, two samples with the same Degree of Mercerization may have quite a different technical quality of mercerization

With regard to the interesting experiments described in the paper on "The Behaviour of Cottons of Various Origins under Definite Swelling Processes" Dr Pickard said it was very difficult to distinguish by a laboratory method between American and Egyptian growths It was a very difficult and, so far as present knowledge was concerned an almost impossible task He pointed out that the method suggested was no better than those which already existed in that the extreme values for say American and Egyptian growths overlapped

Dr Pickard remarked that in the paper "Studies on the Dyeing of the Cotton Fibre," the sense might have been altered somewhat in the translation He referred to the word 'bleached" In some sections of the trade the term "bleached" cotton was applied to cotton which had gone through the bleaching bath, but to other sections of the trade it meant cotton that had gone into the bleach works and might merely have had a preliminary scouring There was no clear definition in England, he believed of what was meant by 'bleached" To some sections of the trade it meant one thing and to others it meant another, the confusion was increased by use of the term "half bleached"

Dr **Sieber** replied that he had taken these points into consideration, and that he could vouch for all the statements he had made in the papers

COTTON AND JUTE BAGGING

The **Chairman** then announced that Mr Arno S Pearse had a statement to make regarding the tests carried out on the question of jute and cotton bagging for cotton bales

Mr **Pearse** said "The delegates who were present at the meeting of the Egyptian Section yesterday will remember that they have not received any report on the spinning tests of the shipments that were being made on cotton bagging and jute bagging I telegraphed at once to one of the firms, and have just received a reply from Sir George Holden, Bart, the managing director of the Combined Egyptian Mills in England, to the effect that cotton bagging had proved far superior to jute bagging, but that exact figures could only be supplied later* Besides this, the waste value of the cotton bagging would be considerably higher than that of jute bagging (probably ten times as much)"

Mr Pearse said they now wanted to get the results from the other firms It would help the work if the delegates would give instructions on the question

"The Congress might empower the Egyptian Section in Egypt to continue its work on research in the direction of cotton bagging and should give an assurance that the spinners themselves will undertake to compare scientifically the advantages resulting from cotton bagging If you give us this assurance, then the Egyptian Committee in Egypt will continue to work with Sir George Holden to examine a method which he declares to be far superior to jute bagging"

The **Chairman** said that he was sure that the Egyptian Committee would agree to the proposals made

Dr **Pickard** said that the Shirley Institute would provide the technical experts to carry out the tests in order to obtain the best opinion on the difference between the raw material packed in cotton bags as against material in jute bags

Mr **Arno S Pearse** said that it was on that understanding that the April shipments were made "We were assured that the Shirley Institute would supervise the spinning of this cotton," added Mr Pearse

This concluded the business of the day, and the Congress was, therefore, terminated until the Saturday at Carlsbad

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* Since then it has been ascertained that 11 ends were down in two hours spinning where the cotton was packed in cotton bagging whilst 28 ends were down in the same period of time where the identical cotton was packed in jute bagging

CONCLUDING SESSION, held in the "Kursaal," at Carlsbad (*Karlovy Vary*).

Saturday, June 10th, 1933 10 a.m.

The closing session of the Congress took place under the presidency of Baron THEODOR LIEBIG.

A large number of delegates assembled in the large hall of the Kursaal. The President of the Congress, Baron Theodor Liebig, was accompanied on the platform by Mr Fred Mills (England), the Chairman, the Deputy Mayor of Carlsbad, and members of the International Committee.

The President, Baron LIEBIG, addressed the delegates first in German and then in English. He said that in Prague, by dint of hard work, the delegates had discussed details and questions of great importance to the whole of the cotton industry, and to day they had met in order to translate the results of the deliberations into resolutions. "Before however, this matter is allowed to proceed, perhaps you will permit me, as President of the German Textile Association in this country, to extend to you a very hearty welcome, a welcome to a city which, although not a textile centre, is in a very important industrial district."

Baron Liebig went on to say that the health giving springs of Carlsbad served the individual, but they could not restore an ailing industry. He concluded by expressing the hope that the resolutions to be adopted in the well known Spa of Carlsbad would help to restore the economic life and that they would be helpful for the future welfare of the cotton industry of the world.

The DEPUTY MAYOR OF CARLSBAD then addressed the delegates, and gave them an official welcome on behalf of the Municipality. His remarks were received with attention, and although delivered in German, and therefore not followed by all the delegates, everyone present felt the warmth and sincerity of his good wishes for a successful conclusion to the Congress.

Mr FRED MILLS, Chairman of the Session, then said: Baron Liebig has referred to the fact that the last session of this Congress is being held in the beautiful Spa of Carlsbad. I gather that these spas are intended to serve people suffering from the indiscretions of everyday life, I think it is proper, therefore, that we should have this final session in an atmosphere of that character. I hope that the disappearance of the effects of the indiscretions of our business lives will be the result of our work here this morning.

"The final session," went on Mr Mills, "is to consider resolutions arising out of the discussions that have taken place at our previous sittings of the Congress. We have deliberated on many subjects, the resolutions have already been carefully considered by the Committee, and they are now to be placed before this final session. I now ask the General Secretary to submit for approval or otherwise the resolutions which have been drafted as a result of the discussions which have taken place at the previous sittings of the Congress."

Mr NORMAN S PEARSE, the General Secretary, then read the first resolution as follows —

FALSE PACKING OF AMERICAN COTTON

That, in view of the accumulating complaints of false packing in American cotton, this Congress strongly condemns the practice which causes serious difficulties in the preparatory and spinning processes

' It respectfully urges the United States Department of Agriculture to take all possible steps to ensure the elimination of an evil which results in financial loss to the spinner and general disorganization in the trade

With this object in view, the Congress suggests that the bands of all bales should be punched with a number and mark in order to enable spinners to trace the source of origin of false baling

The resolution was unanimously adopted, and the Secretary read the next resolution —

CURRENCY, TARIFFS AND CREDIT RESTRICTIONS

That this Congress representing twenty three countries, resolves to communicate to the representatives of nations assembled for the World's Economic and Monetary Conference its gratification at the prominence given to credit and currency restrictions on the agenda of the Conference

'Whilst welcoming every effort designed to ensure a reduction of tariffs and other political restrictions, this Congress expresses the conviction that a substantial rise in commodity prices is of paramount and urgent necessity it is also essential that for the realization of these aims an early universal stabilization of currencies should be established"

The CHAIRMAN Is there any comment

Mr T ASHHURST England Whilst agreeing in the main with the general tenor of the proposed resolution we of the Cotton Manufacturers' Association of England feel that it does not adequately express what we consider necessary and I would suggest that at the end of the fourth line after the word "credit the word "tariffs is inserted We also desire that after the word "necessity a full stop should be inserted instead of a semi colon This would then mean a capital ' I and would start a new sentence I would also suggest that the phrase at the end of the resolution should read 'an early and equitable stabilization of currencies should be established

The CHAIRMAN Does any other gentleman desire to make observations

Dr G MYLIUS Italy I do not think that the word "political" in the phrase 'and other political restrictions' is quite correct Therefore I should strike out the word "political say simply 'a reduction of tariffs and other restrictions"

Mr T DRIVER (England For the sake of clearness, and so as to give full weight to this resolution, I suggest that the following should be inserted after the word "necessity" "and that sufficient currency and credit facilities should be available to give effect to such advances in value," which would provide the machinery for giving effect to what we desire. If we had no increase in currency and credit facilities it would mean restriction in the volume of trade, and consequently would result in increased unemployment. Therefore, after the word " necessity " we ought to add "sufficient currency and credit facilities," etc.

Mr. PAUL SCHLUMBERGER (France): I think these words are very dangerous. Too much credit is very dangerous.

Mr. E. SMITH (England): It is a question of what should come after the word " necessity." We wish to raise prices. I suggest the following words: " in order to increase the purchasing power of the land worker."

The CHAIRMAN: I would suggest to my English colleagues the advisability of not pressing this particular point which has been raised by Mr. Driver and Mr. E. Smith. There was a sharp division of opinion on the Committee as to what should be put in the resolution. I think that the full wishes of the Congress are met with in the resolution, and I ask the English delegates not to press this particular point. I think we go quite a long way in trying to meet both points of view. It is remarkable that all the trouble starts after the word " necessity." I suggest that our friends should agree to the resolution and allow it to go forward with the minor alterations previously suggested.

Mr. C. TATE (England): As representing the Cotton Spinners' and Manufacturers' Association of Great Britain, we cannot allow the resolution to go forward without our submitted words " and equitable " before " stabilization of currencies should be established."

The CHAIRMAN: It is proposed to accept the words " tariffs " and " equitable," and insert them in the sentences suggested. I will now ask the General Secretary to read the resolution with the new words inserted

Mr. Pearse then read the amended resolution:—

> " That this Congress, representing twenty-three countries, resolves to communicate to the representatives of nations assembled for the World's Economic and Monetary Conference, its gratification at the prominence given to credit, tariffs and currency restrictions on the agenda of the Conference.
>
> " Whilst welcoming every effort designed to ensure a reduction of tariffs and other restrictions, this Congress expresses the conviction that a substantial rise in commodity prices is of paramount and urgent necessity; it is also essential that for the realization of these aims an early universal and equitable stabilization of currencies should be established."

The CHAIRMAN: Has any delegate any comment on the resolution just read out by the General Secretary?

Mr. R. SEYRIG (France): The original resolution has been worded in the manner we all desire. The word " tariffs " should not be put in twice, because in the second part of the resolution the importance given to tariffs and restrictions has been weighed to a point which we can all accept. That is why I believe we cannot accept the word " tariffs " in the first portion, and give it such importance by putting it in both paragraphs Of course, we will willingly accept the insertion in the last sentence of the word equitable '' But I am sorry to say that we cannot be expected to give this importance to the question of tariffs in the resolution We believe the word has received sufficient importance by being inserted in the second paragraph

Mr Ashurst (England) What we are concerned about is putting in the word " equitable ''

The Chairman then asked Mr N S Pearse to read the resolution leaving out the word " tariffs ' in the first section

The General Secretary then read the resolution as directed by the Chairman

The Chairman We now seem to have arrived at the point as to whether there should be a full stop or a semi colon after the word 'necessity ' I suggest that that part should remain as read out by the General Secretary

The resolution was then moved, seconded and carried unanimously

The final resolution read as follows —

> " *That this Congress, representing twenty three countries, resolves to communicate to the representatives of nations assembled for the World's Economic and Monetary Conference, its gratification at the prominence given to credit and currency restrictions on the agenda of the Conference*
>
> " *Whilst welcoming every effort designed to ensure a reduction of tariffs and other restriction , this Congress expresses the conviction that a substantial rise in commodity prices is of paramount and urgent necessity, it is also essential that for the realization of these aims an early universal and equitable stabilization of currencies should be established* ''

The Chairman then asked the General Secretary to read the next resolution —

FUTURES MARKETS

> " Realizing the necessity for the existence of cotton futures markets in the interests of the cotton industry of the world, this Congress, whilst deprecating their use as a means of gambling, is of opinion that the laws of certain countries governing these markets should be revised in such a manner as to avoid unscrupulous debtors availing themselves of same, with a view to escaping liabilities incurred under a futures contract ''

Mr Fred Holroyd (England) I think you ought to put the word " the '' in front of " same '' It would then read " debtors availing themselves of the same ''

Mr J H Thorp (England) " I beg to suggest that in the sixth line, after the word " debtors,'' instead of " availing themselves of same, ' there should be inserted " taking advantage of the said laws '' It would then read " unscrupulous debtors taking advantage of the said laws with a view to escaping liabilities,'' etc

The Chairman I think that is an improvement

The resolution was then altered as suggested, moved, seconded and carried unanimously.

"*Realizing the necessity for the existence of cotton futures markets in the interests of the cotton industry of the world, this Congress, whilst deprecating their use as a means of gambling, is of opinion that the laws of certain countries governing these markets should be revised in such a manner as to avoid unscrupulous debtors taking advantage of the said laws, with a view to escaping liabilities incurred under a futures contract.*"

The General Secretary then read the next resolution as follows:—

RENEWAL OF MOISTURE AGREEMENT FOR EGYPTIAN COTTON.

"*That this Congress hereby renews the agreement relating to moisture in Egyptian cotton originally adopted at the* 1931 *Paris Congress; the renewal to remain in force without any change until September,* 1936."

The CHAIRMAN: Any comment, gentlemen? There being none, I will put the resolution to the meeting.

The resolution was then moved, seconded and carried unanimously.

The General Secretary then read the following resolution on

NEW VARIETIES OF EGYPTIAN COTTON.

"This Congress is of opinion that in the interests of the Egyptian section of the cotton-spinning industry, it is essential that (with the excepion of quantities of cotton required for the spinning of superior yarns) growers should produce the largest possible quantities of cotton of moderate length and fibre, with special regard to uniformity in length and strength."

The CHAIRMAN: Is there any comment?

Dr. W. L. BALLS (Egypt): I move that we delete the words "and fibre," and make the last part of the sentence read "uniformity in length and strength of fibre."

The resolution was then altered and read out by the General Secretary as follows:—

"*This Congress is of opinion that in the interests of the Egyptian section of the cotton-spinning industry, it is essential that (with the exception of quantities of cotton required for the spinning of superior yarns) growers should produce the largest possible quantities of cotton of moderate length, with special regard to uniformity in length and strength of fibre.*"

There being no further questions, the resolution was moved, seconded and carried unanimously.

The CHAIRMAN: We will now take the next resolution.

The General Secretary then read the following resolution: —

COTTON COVERING FOR EGYPTIAN BALES.

"*From experience already gained, this Congress is satisfied that cotton is superior to jute for the covering of Egyptian* *bales, and, whilst thanking the Egyptian Government for the work already accomplished and the assurance of continued experiments in this direction, urges that Government, and commercial houses, to undertake further trial shipments to England and other countries, as detailed in the Report presented to this Congress by Mr. Arno S. Pearse.*

"The Congress records its satisfaction at the willingness of the British Cotton Industry Research Association to supervise scientifically the spinning tests of these trial shipments of cotton, and to report their findings to a future meeting of the Joint Egyptian Cotton Committee.

"In the meantime, the Congress appeals to spinner members to co-operate in this matter by taking spinning tests in various counts of mule yarns from these experimental shipments."

The CHAIRMAN: Is there any comment on the resolution?

There being no questions, the resolution was moved, seconded and carried unanimously.

The CHAIRMAN: There was a suggested resolution to be placed before the Congress relating to double-shift working. This has caused no little trouble to the Committee, and it was found, in the judgment of the Committee, that it would be almost impossible to frame a resolution which would receive the unanimous vote of the Congress. It was suggested, therefore, that the matter should be placed merely on the Minutes. It would not, therefore, be a resolution, but would be simply recorded on the Minutes. I will now ask the General Secretary to read the suggested Minute.

The General Secretary then read the following Minute:—

MAINTENANCE OF THE BALANCE BETWEEN PRODUCTION AND DEMAND.

There was a strong feeling expressed in the Congress that the system of double- and treble-shift working should be gradually abolished.

It was, however, found impossible to reach a unanimous decision on the question, and the Congress therefore decided to postpone further consideration.

In the meantime, the affiliated Associations are recommended to devise and put into operation any temporary scheme capable of maintaining the balance between production and demand.

The members of the affiliated Associations are also recommended to study carefully the Congress paper prepared by Mr. Otto Bankwitz, and are asked to communicate their views on the various proposals contained therein to the headquarters of the International Federation in Manchester for consideration at the next meeting of the International Committee.

The CHAIRMAN: Does anybody wish to make any observation on this point?

There being no comment, the Minute was moved and seconded, and the delegates then passed the Minute unanimously.

The CHAIRMAN That is carried Now I understand that Dr Mylius (Italy) has an interesting statement to make

INVITATION TO HOLD THE NEXT CONGRESS IN ITALY

Dr G MYLIUS (Italy The Committee had intended to hold Congresses every third year only but considering the great interest which this present Congress has aroused the Committee has thought fit not to allow more than two years to lapse before holding the next Congress and I have pleasure therefore to suggest that the next Congress should be held in Milan in 1935 I give you this cordial invitation on behalf of the Italian cotton industry We hope that by then condition of trade and industry will have greatly improved

The CHAIRMAN On behalf of the International Cotton Federation I accept the very kind invitation of Dr Mylius to hold the next Congress in Italy

The proposal was carried with acclamation

VOTES OF THANKS

The CHAIRMAN We are now coming to the end of the session but I think we cannot allow it to break up without a certain duty being performed I now ask Mr John Syz Switzerland) to propose a vote of thanks

Mr SYZ speaking in German moved a hearty vote of thanks to the various Presidents Chairmen writers of papers to the Associations of Prague and Reichenberg and to all who had in any way contributed towards the great success of this the Sixteenth International Cotton Congress

Mr F HOLROYD (England) We have had a most successful Congress here in Prague and Carlsbad and the success has been contributed to in my opinion by the beautiful surroundings in which we have met

Mr Holroyd then referred to the magnificent hospitality meted out to the delegates and remarked that at the Inaugural Reception the President Mr Richard Morawetz apologized for the lack of lavish hospitality as it would not be in keeping with the depressed state of the cotton industry

That has not been carried out said Mr Holroyd ' because we have had all the hospitality we could wish for and because of these meetings we have been able to come to certain resolutions which will do a great good to the industry as a whole I am delighted that we were unanimous on the resolutions

We should thank the various chairmen continued Mr Holroyd They have presided over the meetings well They have performed their duties excellently Our experience here has been so delightful that on some future occasion if the Czecho Slovakian Master Cotton Spinners Association should ask us to come to Czecho Slovakia again every one of us will come (Loud applause) I have therefore very great pleasure in seconding the vote of thanks

Mr PAUL SCHLUMBERGER speaking in German

thanked Mr Syz and Mr Holroyd for their very kind allusion to the members who had acted as chairmen of the meetings

Baron THEODOR LIEBIG ' On behalf of the German Textile Association, the Federation of Czechoslovak Industries and the Czechoslovak Cotton Spinners Association, I should like to express my warmest thanks for the kind words of Mr John Syz and Mr F Holroyd

" It will be a matter of great satisfaction to us if we may feel that, in making arrangements for this Congress, we have in some way been instrumental in furthering its success The accomplishment of this work would have been impossible without the valuable co-operation of the General Secretary of the International Federation in Manchester In reviewing the course of the whole Congress it is once more obvious that positive results can only be achieved by the unity of all forces

I cannot allow this opportunity to pass without expressing our united gratitude to President Masaryk and to the Government for the earnest interest which they have taken throughout in the efforts of our Association

' May we look for a continuance of the valuable help of all public authorities in the important work we have undertaken

" It is our sincere wish that all the delegates to this Congress, and all those who have accompanied them, will look back with pleasure to the days they spent in the heart of Central Europe in Prague and Carlsbad, and we trust that the few hours that they still will spend in our world famed health resort will bring them both physical and mental refreshment "

Mr FRED MILLS (England) I cannot allow the Congress to come to an end without associating myself with the votes of thanks Speaking as an Englishman, I must assure our friends in Czecho-Slovakia that we have enjoyed our visit to the full Your hospitality has been magnificent We are indebted to everyone who has contributed to our well being in this part of the world Also, on behalf of our ladies, I thank you for the hospitality extended to them by the people of your country

" Deep down in our hearts," continued Mr Mills " there has been a real desire to solve the problems confronting the industry From the manner in which the remarks of Mr Holroyd were received at the Congress at a previous sitting, I know everyone was taking a deep and serious interest in the problems before us

" I believe that the Congress held in Prague and Carlsbad will be the beginning of a frank understanding in the International Federation "

This ended the final session of the International Cotton Congress

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In the afternoon the delegates and ladies went on a specially arranged excursion by the funicular railway to the " Freundschaftshohe," Carlsbad Tea was served at the kind invitation of the Municipality of Carlsbad

RESOLUTIONS

Adopted by the XVI International Cotton Congress,
Prague and Carlsbad, June 7-10, 1933.

FALSE PACKING OF AMERICAN COTTON.

That, in view of the accumulating complaints of false packing in American cotton, this Congress strongly condemns the practice, which causes serious difficulties in the preparatory and spinning processes.

It respectfully urges the United States Department of Agriculture to take all possible steps to ensure the elimination of an evil which results in financial loss to the spinner and general disorganization in the trade.

With this object in view, the Congress suggests that the bands of all bales should be punched with a number and mark, in order to enable spinners to trace the source of origin of false packing.

CURRENCY, TARIFFS AND CREDIT RESTRICTIONS.

That this Congress, representing twenty-three countries, resolves to communicate to the representatives of nations assembled for the World's Economic and Monetary Conference its gratification at the prominence given to credit and currency restrictions on the agenda of the Conference.

Whilst welcoming every effort designed to ensure a reduction of tariffs and other restrictions, this Congress expresses the conviction that a substantial rise in commodity prices is of paramount and urgent necessity; it is also essential that for the realization of these aims an early universal and equitable stabilization of currencies should be established.

FUTURES MARKETS.

Realizing the necessity for the existence of cotton futures markets in the interests of the cotton industry of the world, this Congress, whilst deprecating their use as a means of gambling, is of opinion that the laws of certain countries governing these markets should be revised in such a manner as to avoid unscrupulous debtors taking advantage of the said laws, with a view to escaping liabilities incurred under a futures contract.

RENEWAL OF MOISTURE AGREEMENT FOR EGYPTIAN COTTON.

That this Congress hereby renews the agreement relating to moisture in Egyptian cotton originally adopted at the 1931 *Paris Congress; the renewal to remain in force without any change until September* 1936.

NEW VARIETIES OF EGYPTIAN COTTON.

This Congress is of opinion that in the interests of the Egyptian section of the cotton-spinning industry, it is essential that (with the exception of quantities of cotton required for the spinning of superior yarns) growers should produce the largest possible quantities of cotton of moderate length, with special regard to uniformity in length and strength of fibre.

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COTTON COVERING FOR EGYPTIAN BALES.

From experience already gained, this Congress is satisfied that cotton is superior to jute for the covering of Egyptian bales and, whilst thanking the Egyptian Government for the work already accomplished and the assurance of continued experiments in this direction, urges that Government, and commercial houses, to undertake further trial shipments to England and other countries, as detailed in the Report presented to this Congress by Mr. Arno S Pearse.

The Congress records its satisfaction at the willingness of the British Cotton Industry Research Association to supervise scientifically the spinning tests of these trial shipments of cotton and to report their findings to a future meeting of the Joint Egyptian Cotton Committee.

In the meantime, the Congress appeals to spinner members to co-operate in this matter by taking spinning tests in various counts of mule yarns from these experimental shipments.

The Secretary was instructed to insert the following wording in the official report in connection with the discussion which took place upon the maintenance of the balance between production and demand, although not being in the form of a resolution.

MAINTENANCE OF THE BALANCE BETWEEN PRODUCTION AND DEMAND.

There was a strong feeling expressed in the Congress that the system of double and treble shift working should be gradually abolished.

It was, however, found impossible to reach a unanimous decision on the question, and the Congress therefore decided to postpone further consideration.

In the meantime the affiliated associations are recommended to devise and put into operation any temporary scheme capable of maintaining the balance between production and demand.

The members of the affiliated associations are also recommended to study carefully the Congress paper prepared by Mr. Otto Bankwitz, and are asked to communicate their views on the various proposals contained therein to the headquarters of the International Federation in Manchester for consideration at the next meeting of the International Committee.

RESOLUTIONS SUR LES QUESTIONS GENERALES.

Changes — tarifs et entraves au commerce :—

Le Congrès, représentant 23 pays, décide d'informer les délégués des diverses nations assemblés à la Conférence Economique et Monétaire Internationale qu'il est heureux de la prépondérance donnée par l'ordre du jour de la Conférence aux questions touchant les restrictions apportées au crédit et aux changes.

Tout en saluant tout effort de nature à assurer la réduction des tarifs de douanes et la diminution des autres restrictions, le Congrès exprime la conviction qu'une hausse substantielle des prix de gros est d'une extrême et urgente nécessité, il estime également indispensable pour permettre d'atteindre ce but qu'une stabilisation générale et équitable des monnaies soit réalisée à bref délai.

RESOLUTION SUR LE COTON D'AMERIQUE.

Fourbaudage en soie et en classe :—

Constatant les doléances qui s'accumulent au sujet du fourbaudage en soie et en classe des cotons d'Amérique, le Congrès condamne énergiquement cette pratique laquelle entraine de sérieuses difficultés dans le processus de la préparation et celui de la filature.

Il insiste respectueusement auprès du Département de l'Agriculture des Etats-Unis pour que ce dernier prenne toutes mesures possibles de nature à remédier à un mal qui a pour effet de causer des pertes d'argent aux filateurs et d'apporter dans les affaires un élément de trouble général.

A cet effet le Congrès suggère que les cercles de toutes les balles soient estampillés de chiffres et de marques de manière à permettre aux filateurs de déterminer l'origine du fourbaudage.

RESOLUTIONS SUR LE COTON D'EGYPTE.

Renouvellement de l'accord sur l'humidité du coton d'Egypte :—

Le Congrès renouvelle l'accord intervenu en 1931 au Congrès de Paris au sujet de l'humidité dans le coton d'Egypte, ce renouvellement ayant pour effet de maintenir l'accord en vigueur sans aucun changement jusqu'au Septembre 1936.

Nouvelles variétés de coton d'Egypte :—

Le Congrès estime que, dans l'intérêt de la filature de coton d'Egypte, il est essentiel que (exception faite des quantités de coton nécessaires à la filature des filés de numéros élevés) les producteurs fournissent le plus possible de coton de longueur moyenne et en même temps qu'ils s'attachent spécialement à la régularité de la soie ainsi qu'à la résistance de la fibre.

Emballages en coton pour les balles égyptiennes :—

Se fondant sur des expériences déjà faites, le Congrès constate que le coton est supérieur au jute pour l'emballage des balles de coton d'Egypte. Il remercie le gouvernement égyptien du travail déjà accompli par lui à cet égard et de l'assurance qu'il donne de poursuivre des expériences dans ce sens, et il demande que le gouvernement égyptien ainsi que les maisons d'exportation continuent à expédier en Angleterre et dans d'autres pays des lots d'essai ainsi qu'il est expliqué dans le rapport présenté au Congrès par M. Arno Pearse.

Le Congrès se déclare très heureux que la British Cotton Industry Research Association soit disposée à contrôler scientifiquement les essais à la filature des lots d'essai ainsi expédiés d'Egypte et à faire un rapport de ses conclusions à cet égard à une des prochaines réunions du Comité Mixte du Coton Egyptien.

En attendant le Congrès fait appel à ses membres filateurs pour coopérer à l'étude de cette question en faisant des essais à la filature en divers numéros de filés fins avec le coton provenant desdits lots sur les métiers à renvideur.

RESOLUTION SUR LE MARCHE A TERME DU COTON.

Tout en réalisant que l'existence des marchés à terme du coton est indispensable aux intérêts de l'industrie cotonnière dans le monde, le Congrès condamne le recours à ces marchés dans un esprit de jeu, mais il estime que les lois les règlementant devraient être revisées de manière à éviter que des débiteurs dépourvus de scrupules puissent se prévaloir de ces lois pour échapper aux obligations dérivant de leurs contrats de terme.

Maintien de la balance entre la production et la demande :—

Vue l'impossibilité d'arriver à une décision unanime sur la question de deux ou trois équipes, le Congrès décida de mettre les opinions suivantes dans le procès verbal :—

Un sentiment très fort a été exprimé au Congrès pour que le système de l'équipe double ou triple soit graduellement aboli.

Il fut toutefois trouvé impossible d'arriver à une décision unanime sur la question, et le Congrès décida par conséquent de renvoyer toute considération ultérieure.

Dans l'entretemps les associations affiliées sont priées de projeter et de mettre en fonctionnement un plan temporaire capable de maintenir la balance entre la production et la demande.

Les membres des associations affiliées sont également priées d'étudier soigneusement le mémoire présenté au Congrès par M. Otto Bankwitz et de communiquer leurs vues sur les diverses propositions qui y sont contenues, au siège de la Fédération Internationale à Manchester en vue de la considération pour la prochaine réunion du Comité International.

RESOLUTIONEN DES 16. INTERNATIONALEN BAUMWOLLKONGRESSES.

"FALSCH GEPAKTE" AMERIKANISCHE BAUMWOLLLE.

Infolge der sich häufenden Klagen über "falsch gepackte" amerikanische Baumwolle verurteilt der Kongress auf das strengste diesen Uebelstand, welche ernste Schwierigkeiten im Vorbereitungs- und Spinnprozess verursacht.

Der Kongress ersucht das "United States Department of Agriculture," alle Schritte zur Abschaffung dieses Uebels, welches den Spinnern finanzielle Verluste und eine allgemeine Verwirrung im Handel verursacht, zu unternehmen.

Zu diesem Zweck schlägt der Kongress vor, dass in die eisernen Reifen der Ballen eine Nummer und eine Marke eingestanzt werde, durch welche die Spinner die Quelle der falschen Packung feststellen können.

WÄHRUNGEN, ZOLL - TARIFE UND KREDITEINSCHRÄNKUNGEN.

Der Kongress, welcher Delegierte von 23 Ländern umfasst, beschliesst, den Vertretern der Länder, die auf der Weltwirtschafts-und Währungskonferenz zusammentreten, die Genugtung darüber zum Ausdruck zu bringen, dass das Problem der Kredit- und Geldbeschränkung auf die Tagesordnung der Konferenz gesetzt wurde.

Der Kongress begrüsst jede Bemühung, eine Herabsetzung der Zolltarife und eine Milderung anderer Beschränkungen herbeizuführen und spricht die Ueberzeugung aus, dass ein wesentliches Steigen der Rohstoffpreise von höchster und dringendster Notwendigkeit ist. Für die Verwirklichung dieser Ziele ist eine baldige, angemessene Stabilisierung der Währungen auf der ganzen Welt notwendig.

TERMINGESCHÄFTE.

Zur Verwirklichung der notwendigen Erhaltung der Terminbaumwollmärkte, die im Interesse der Baumwollindustrie der ganzen Welt gelegen ist, empfiehlt der Kongress, obwohl er die Ausnützung der Termingeschäfte zu reinen Spekulationszwecken verwirft, die Termingeschäfte regelnden Vorschriften so abzuändern, dass es skrupulösen Schuldnern unmöglich gemacht wird, sich ihren Verpflichtungen aus solchen Termingeschäften zu entziehen.

ERNEUERUNG DES FEUCHTIGKEITSABKOMMENS FÜR AEGYPTISCHE BAUMWOLLE.

Der Kongress erneuert das Abkommen betreffend die Feuchtigkeit ägyptischer Baumwoll, welches ursprünglich vom Pariser Kongress im Jahre 1931 angenommen wurde. Diese Erneuerung soll ohne irgendwelche Aenderung bis September 1936 in Kraft bleiben.

NEUE SORTEN AEGYPTISCHER BAUMWOLLE

Der Kongress ist der Meinung dass es im Interesse der aegyptischen Sektion der Baumwollspinnerei sehr witchtig ist dass — abgesehen von dem Bedarfe fur die Erzeugung ganz hochwertiger Garne die Pflanzer moglichst grosse Mengen von Baumwolle von nicht allzugrosser Lange mit besonderer Berucksichtigung der Einheitlichkeit in der Lange und Starke der Fasern erzeugen sollten

BAUMWOLLPACKUNG FUR AEGYPTISCHE BALLEN

Nach den bereits gemachten Erfahrungen ist der Kongress uberzeugt dass Baumwolltuch zum Verpacken aegyptischer Ballen besser beeignet ist als Jute Er dankt der aegyptischen Regierung fur die bereits geleistete Arbeit und fur die Zusicherung diese Versuche in gleicher Richtung fortzusetzen Er ersucht schliesslich dringend die aegyptische Regierung und die Exporthauser weitere Probesendungen nach England sowie anderen Lander in der Art und Weise zu schicken wie sie Herr Arno Pearse in seinem dem Kongresse vorgelegten Referat beschrieben hat Der Kongress gibt seiner Befriedigung uber die Bereitwilligkeit des britischen Baumwollforschungsinstitutes Ausdruck das Verspinnen dieser Probesendungen wissenschaftlich zu uberwachen und uber das Ergebnis dieser Versuche einer der nachsten Sitzungen des gemeinsamen agyptischen Baumwollkomites zu berichten

Inzwischen fordert der Kongress die Spinner dringendst zur Mitarbeit in dieser Frage auf insbesondere durch die Verarbeitung dieser Probeballen in verschiedene Garnnummern auf Selfaktoren

AUSGLEICH ZWISCHEN ANGEBOT UND NACHFRAGE

Der Kongress war sich einig daruber dass uber das Mehrschichtensystem kein einheitlicher Beschluss gefasst werden konnte man einigte sich jedoch dahin dass nachstehende Ansichten in das Protokoll aufzunehmen seien —

In der Frage des Mehrschichtensystems kam auf dem Kongress die Meinung zum Ausdruck dass das Arbeiten in doppelten und dreifachen Schichten allmahlich beseitigt werden soll Es stellte sich jedoch heraus dass eine einheitliche Entscheidung in dieser Frage nicht herbeigefuhrt werden konnte Der Kongress wird aber diese Frage zwecks spaterer Behandlung im Auge behalten

In der Zwischenzeit wird den angeschlossenen Verbanden empfohlen vorlaufige Massnahmen auszuarbeiten und in Kraft zu setzen welche der Schaffung eines Gleichgewichtes zwischen Angebot und Nachfrage dienen sollen Den Mitgliedern der angeschlossenen Verbande wird weiterhin empfohlen den Bericht des Herrn Otto Bankwitz aufmerksam zu studieren Sie werden gebeten ihre Meinung uber die hier enthaltenen verschiedenen Vorschlage dem Buro des internationalen Verbandes in Manchester bekanntzugeben damit sie bei der nachsten Sitzung des internationalen Komites erwogen werden konnen

LIST OF DELEGATES

AUSTRIA

Verein der Baumwollspinner und Weber Oesterreichs Maria Theresien strasse 32 34 Vienna

Otto Anninger Spinnerei u Weberei Teesdorf Schonau A G Vienna (Substitute Member for Austria on the International Cotton Committee and Vice President of the Austrian Association)

Dr Robert Anninger Spinnerei u Weberei Teesdorf Schonau A G Vienna

Kammerrat Erich Seutter Loetzen President Seutter u Co Vienna (President of the Austrian Association)

Dr Richard Mertens General Director M B Neumann s Sohne A G Borsegasse 14 Vienna I

Hans Ganahl Firma Carl Ganahl & Co Feldkirch

Ladies Mrs Clara Anninger

BELGIUM

Societe Cooperative Association Cotonniere de Belgique Rue Savaen 58 Ghent

Gaston Braun Ghent

Count Carlos de Hemptinne Boulevard de l Citadelle 37 Ghent

CHINA

Ching Tsiang Nign Chinese Employers Delegate International Labour Conference Geneva

CZECHO SLOVAKIA

Hospodarsky Svaz Csl Pradelen Bavlny Revolucni 1a Prague

Dr Arens Danubius Bratislava

Josef Barton Dobenin ml Nachod

Herrmann Blaschka F Schmitt C Lipa

Leopold Bloch Bauer

Bedrich Bondy C Skalice

Hans Blumenfeld

Cosmanos

Ing Jiri Cerych

Jaromir Cerych

Frantisek Dolensky Manager Mautnerovy textiln zavody Praha

Oskar Fleissig Manager Hronovska pradelna bavlny Hronov

Theodor Grohmann Gebruder Grohmann Wisterschan

Wenzel Herlt Manager R Weber s Erben Sluknov

Gustav Hamza Director Mautnerovy textilni zavody Praha

Jan Hernych a Syn akc textilni zavody Usti n O

Dr Ing Fritz Honig M Robitschek & spol Choren

Bretislav Hybler Semily

Dr Ernst Kann Max Helling Maly Ujezd Praha

Oskar Kaufmann General Manager Mautnerovy textilni zavody Praha

Dr Emil Kreibich Rudolf Weber Erben Sluknov

CZECHO-SLOVAKIA—*continued*

Eugen Kubinzky, Praha.
Dr. Fritz Kubinzky, Praha.
Willy Vodvarzka-Kubinzky, Praha.
Dr. Adolf Lehrmann, Fa Johann Lehrmann & Sohne Fleissen.
M. Loew, Manager, Prádelna a barevna, a. s., Náchod.
Egon Mitscherlich, A. Mitscherlich a syn, Praha.
Willy Nebel, Manager, A. Pasold a syn, Fleissen.
Erich Pasold, Erich Pasold a syn, Fleissen.
Ing. Leo Perutz, Praha.
Paul Perutz, A. G. fur Textilindustrie, Falknov.
Ing. Richard Perutz, Praha.
Dr. Hans Pick, Wien.
Ing. Otto Pick, Wien.
Ferdinand Pribyl ml., Slany.
Ing. Ernst Reuter, Seidl A. G., M. Schonberg.
Arch. Fr. Sobotka, F. Sobotka & Sohn, Praha.
Wilhem Sobotka, Jos. Sobotka & Co., Praha.
Franz Schnabel, Nová Paka.
Rudolf Stein, Manager, Benedikt Schroll's Sohn, Broumov.
Rudolf Steinsky-Sehnoutka, Hradec Králové.
Arnost Winter, Manager, Prádelna a barevna, a. s., Náchod.
Dr. D. Zachystal, Secretary, Hospodárskv Svaz Csl. Prádelen Bavlny, Prague.

Ladies :—

Mrs. Bloch-Bauer.
Mrs. Blumenfeld.
Mrs. Maruska Cerychová.
Mrs. Nada Cerychová.
Mrs. Ruzena Hyblerová.
Mrs. Kann.
Mrs. Kreibich.
Mrs. Kubinzky.
Mrs. Libuse Nováková.
Mrs. Perutz
Mrs. Pick.
Mrs. Pick.
Mrs. Kl. Vodvarzka.

Spolek Ceskoslovenskych Prumyslniku Textilnich, Revolucni 1a, Praha I.

Richard Morawetz, President of the Czechoslovak Textile Manufacturers' Association.

Dr. Ernest Zucker, Náchod, Vice-President of the Czechoslovak Textile Manufacturers' Association (Member for Czechoslovakia on the International Cotton Committee).

A. Bednár, Textilní záody Antonina Bednáre synové, Vamberk.

Bohuslav Jandera, Adolf Jandera, Strojová tkalcovna lneného a bavlneného zbozí, Ustí N. Orlicí.

Ing. Richard Jerie, Erco, E. Roubiczek a spol., Praha VII, 406.

Ing. Frant. Petr Kraus, Arnold Kraus, mechanická tkalcovna, Velké Porící N. Metují.

Dr. Jos. Muzík, General Secretary of the Czechoslovak Textile Manufacturers' Association.

Leopold Singer, Jindrichuv Hradec.

Dr. Alfred Stern, Praha II., Senovázná 4.

Max Stern, A. Stern & Sohn, Mechanische Weberei, Stará Paka.

Zdenek Sochor, mechanická tkalcovna a tiskárna, Dvur Králové N. L.

Ladies : Irma Jeriová.

CZECHO-SLOVAKIA—*continued.*

Vseobecny Nemecky Textilni Spolek (Allgemeiner Deutscher Textilverband), Mühlfeldstr. 6, Liberec (Reichenberg).

Otto Bankwitz, Direktor, Reichenberg.
Walter Brass, i. Fa Wilhelm Brass & Sohne, Hohenstadt.
Hans von Häbler, Fa Joh. Gottfried Häbler, Gross-Schönau.
Gerhard Hannemann, Fa Otto Hannemann, Asch.
Otto Hannemann, Fa Otto Hannemann, Asch.
Moritz Kornfeld, A. G. für Textilindustrie, Falkenau.
Rudolf Kraft, Sekretariat für Industrie, Handel & Gewerbe, Weipert.
H. Kühne, Fa Kühne & Sohne, Goerkau.
Karl Küsebach, Forschungsanstalt für Textilindustrie, Reichenberg.
Theodor Ledig, Fa Otto Hannemann, Asch.
Theodor Liebig, Fa Johann Liebig & Co., Reichenberg.
Wolfgang Liebig, Fa Johann Liebig & Co., Reichenberg.
Max Lindemann, i. Fa Kirchhoff's Nachfl., Asch, Dresden.
Ing. Wilhelm Mahler, Fa Leopold Mahler, Praha.
Josef Rücker, Römerstadt.
Dr. Karl Schwertasek, Forschungsanstalt für Textilindustrie, Reichenberg.
Dr. Wilhelm Sieber, Direktor der Forschungsanstalt für Textilindustrie, Reichenberg.
Max Springer, Fa G. Springer, Römerstadt.
Dr. Josef Walter, Sekretär der Handelskammer, Reichenberg.
Ing. Willy Weber, Fa W. Weber, Schluckenau.
Dr. Karl Devcic-Siegwardein.
Dr. Josef Kislinger.
Dr. Hans Krick.
Hans Krick, jr.
Dr. Wolfgang Polak.

Ladies :—

Mrs. O. Bankwitz.
Miss Devcic-Siegwardein.
Mrs. H. Krick.
Mrs. M. Liebig.
Mrs. W. Liebig.
Mrs. Lindemann.
Mrs. M. Springer-Dorasil.

DENMARK.

Textilfabrikantforeningen, Vesterfarimagsgade, 24, Copenhagen.

Fabricant Holger Sebbelov, Carl Flensburg & Sebbelov, Copenhagen. (Member for Denmark of the International Cotton Committee).

EGYPT.

Members of the Egyptian Section of the Joint Egyptian Cotton Committee.

His Excellency Ahmed Abdel Wahab Pacha, Under-Secretary of State, Ministry of Finance, Cairo (President of the Joint Egyptian Cotton Committee).

His Excellency Emine Yehia Pacha, Egyptian Produce Trading Co., Alexandria.

His Excellency Saleh Enan Pacha.

W. Lawrence Balls, D.Sc., F.R.S., Chief Botanist, Ministry of Agriculture, Cairo.

Fouad Abaza Bey, Director, Royal Agricultural Society, Cairo.

Youssef Nahas Bey, General Secretary, General Agricultural Syndicate, Cairo.

Hussein Enan Bey, Cairo, Ministry of Agriculture, Cairo.

EGYPT—*continued*

BY SPECIAL INVITATION

Alexandria Cotton Exporters Association

H Kupper

E Pinto

Leon Cicurel

Commission de la Bourse de Minet el Bassal Alexandrie

Osman Abaza Bey

R J Rolo

Mohamed A Farghaly

Royal Agricultural Society Cairo —

Dr Aziz Fikry

Paul Reinhart jr Reinhart & Co Alexandria

Ladies —

Mrs Enan Bey

Mrs Nahas Bey

Mrs Cicurel

Miss Kupper

Miss Saba Pacha

Mrs Osman Abaza Bey

ENGLAND

Federation of Master Cotton Spinners Associations Ltd 529 Royal Exchange Manchester

W H Catterall J P The Croft Heyhouses St Annes on Sea (President of the English Federation of Master Cotton Spinners Associations Ltd Member for England on the International Cotton Committee and the Joint Egyptian Cotton Committee

Sir Richard Jackson 105 Windsor Road Oldham (Senior Vice President of the English Federation of Master Cotton Spinners Associations Ltd)

Fred Mills J P Joseph Mills & Sons Ltd Lees Oldham (Past President English Federation of Master Cotton Spinners Associations Ltd President of the Oldham Master Cotton Spinners Association Senior Vice President of the International Cotton Federation)

Frederick Holroyd J P R & T Holroyd Springwood Mills Holywell Green Halifax (Past President of the International Cotton Federation and Member for England on the International Cotton Committee)

J A Barber Lomax Ravenhurst Chorley New Road Bolton

G W Bennet Standard Mill Ltd Rochdale

J J Bradley Acresfield Orrell Mount Wigan

F E Canney 49 Bridgewater Road Walkden

G Clapperton Combined Egyptian Mill Ltd Atherton

H Cliff J P 12 Yorkshire Street Oldham

R J Davenport 11 Victoria Buildings King Street Wigan

J Deveney A Brierley & Sons (1904) Ltd Rochdale

T Driver 91 Windsor Road Oldham

T Dutton Greenhalgh & Shaw Ltd Bolton (Substitute Member for England on the Joint Egyptian Cotton Committee)

A Eastwood Lee & Wrigley Ltd Greenbank Mills Oldham

G W Fielding 32 Booth Street Ashton under Lyne

T E Gartside J P Shiloh Mills Ltd Royton

W Heaps J P Shaw Jardine & Co Ltd Butler Street Mills Manchester (Substitute Member for England on the Joint Egyptian Cotton Committee)

H Hellawell Hyde Spinning Co Ltd Hyde

H Y Henthorn Highlands Cottage Shaw

ENGLAND—*continued*

B. Hesketh, Oak Villa, Longcauseway, Farnworth.
A. Hill, 23, Acresfield, Bolton.
R. T. Holt, District Bank Chambers, Fleet Street, Rochdale.
T. Howe, Queen's Road, Southport.
A. Jackson, 16, Deansgate, Manchester.
Eric S. Langlish, 301, Park Road, Oldham.
W. R. B Mellor, Assistant Secretary, Federation of Master Cotton Spinners' Associations Ltd
G. Morton, Spur Doubling Mill Ltd., Broadstone Hall Road, Reddish
R. Moreton, Struan House, Shaw.
John Pogson, Secretary of the Federation of Master Cotton Spinners' Associations Ltd. and Substitute Member for England on the International Cotton Committee.
C. E. Rhodes, Rhodeson Ltd., Britannia Mills, Crawshawbooth.
A. Taylor, Victor Mills Ltd., Stalybridge.
W. Thornley, Mossley Victoria Spinning Mills Co Ltd., Mossley
J. H. Thorp, 22, Imperial Road, Huddersfield.
J. Waller, Union Ring Mill Ltd , Rochdale.
G. H. Wild, Heywood & Roeacre Mills Ltd., Heywood.

Cotton Spinners' and Manufacturers' Association, Midland Bank House, 26, Cross Street, Manchester.

T. Ashurst, Secretary of the Association (Substitute Member for England on the International Cotton Committee).
E. Smith, Secretary, Burnley Cotton Spinners' and Manufacturers' Association, Burnley.
C. Tate, Secretary, Blackburn District Cotton Employers' Association, Blackburn.
J. Whitaker, Burnley

BY SPECIAL INVITATION.

British Cotton Industry Research Association, Didsbury, Manchester :—
Dr. R. H. Pickard, F.R.S.

International Wool Textile Organization, Bradford :—
Maurice Dubrulle, President.
Walter Low Beer, Vice-President.

Lancashire Cotton Corporation Ltd., Manchester :—
J. Littlewood, Director.

Liverpool Cotton Association :—
Norman L. Cappel, President.
Chas. J. Reiss, C.B.E., Director.

Manchester Chamber of Commerce :—
E. Raymond Streat, Secretary.

Manchester Cotton Association Ltd. :—
E. J. Wilde.

Ladies :—

Mrs. N. L. Cappel.
Miss. Fastwood.
Mrs. H. V. Henthorn.
Mrs. W M. Holden.
Mrs. J. Littlewood.
Mrs. G. Morton.
Mrs. R. Morton.
Miss. R. H. Pickard.
Mrs. E. Raymond Streat.
Mrs. G. H. Wild.

FRANCE.

Syndicat Général de l'Industrie Cotonnière Française, 20, Rue des Capucines, Paris.

Paul Schlumberger, 11, Rue de la Montagne, Mulhouse (Haut-Rhin) (President of the International Cotton Federation and Member for France on the International Cotton Committee).

Roger Seyrig, Etablissements Georges Koechlin, Belfort (Substitute Member for France on the International Cotton Committee and Member of the Joint Egyptian Cotton Committee); also representing the Association Cotonnière Coloniale.

R. A. de la Beaumelle, General Manager of the French Association.

Jacques Andre, Masevaux (Haut-Rhin).

Charles Baudry, Cernay, H. R.

Robert Cleris, Torcy-le-Petit, S. I.

M. Houzard, 30, Rue du Cordier, Rouen, S. I.

Julien le Blan, 22, Rue du Vertbois, Lille (Substitute Member for France on the Joint Egyptian Cotton Committee).

Etienne Thiriez, Etablissements Thiriez & Cartier Bresson, 86, Bld Sebastopol, Paris.

BY SPECIAL INVITATION.

Société Cotonnière Equatoriale Française :—

André Clerc, 71, Rue de la Victoire, Paris.

Ladies —

Mrs. J. André.
Mrs. C. Baudry.
Mrs. R. A. de la Beaumelle.
Mrs. R. Cleris.
Mrs. Houzard.
Miss Le Blan.
Mrs. P. Schlumberger.
Mrs. Thiriez.

GERMANY.

Arbeitsausschuss der Deutschen Baumwollspinner-verbande, Rauchstr. 20, Berlin.

Rechtsanwalt Th. Amfaldern, Geschaftsfuhrer des Arbeitsausschusses der Deutschen Baumwoll-Spinnerverbände, Berlin, W., 35, Rauchstrasse 20.

Dr. Ing. Wilhelm Bauer, i. Fa Spinnerei u. Weberei Offenburg, Offenburg-Baden.

Dr. Walther Bohm, Geschaftsführer des Vereins Süddeutscher Baumwollindustrieller, Augsburg B. 263.

Dr. Hendrik van Delden, in Fa Gerrit van Delden u. Co., Gronau (Vice-President of the International Cotton Federation, Member for Germany on the International Cotton Committee, and President of the German Association).

Kommerzienrat C. Fopp, Bremen.

Direktor H. Hans, in Fa Leipziger Baumwollspinnerei. Leipzig W.33.

W. Hartmann, Generaldirektor, Paul Hartmann, A. G., Heidenheim.

Direktor Jehle, Vorstand der Spinnereien und Webereien im Wiesenthal A. G., Haagen - Baden.

Julius Schmidt, in Fa Julius Schmidt, Vigognespinnerei, Crimmitschau (Sa.).

Direktor L. Steinegger, in Fa Baumwollspinnerei Mittweida, Mittweida (Sa.).

Steinegger jun., Mittweida (Sa).

Direktor Helmut Thorey, Falkenstein (i. V.).

Direktor E. Wunderlich, in Fa Vogtländische Baumwollspinnerei, Hof (Bayern).

GERMANY—*continued.*

BY SPECIAL INVITATION.

Albrecht Muller-Pearse, Bremer Baumwollborse, Bremen.

Direktor E. Schier, Direktor der Bremer Baumwollborse, Bremen.

R. J. Schilling, Director Berlin Office, Universal Winding Co., Kaiserin Augusta Strasse, 69, Berlin W.10.

Ladies .—

Mrs. Steinegger.

HOLLAND.

Nederlandsche Patroonsvereeiniging van Katoenspinners en Wevers, Marthalaan, 12, Enschede.

Joan Geldermann, H. P. Geldermann & Zonen, Oldenzaal (Member for Holland on the International Cotton Committee).

S J. Spanjaard, Stoomspinnerijen en Weverijen, V/H S. J. Spanjaard, Borne.

Prof. Dr. J. Wisselink, Economisch-Instituut voor de Textiel Industrie. Pieter de Hoochweg, 122, Rotterdam.

Jul. N. Menko-Hartogensis, N. J. Menko, Enschede.

J. J. de Monchy, N. V. Nederlandsche Katoenspinnerei, Hengelo

Ladies ·—

Mrs. S. J. Spanjaard.	Miss Spanjaard.

HUNGARY.

Magyar Textilgyarosok Orszagos Egyesulete, Gróf Vigozó Ferenc u. 2, Budapest. V.

Robert von Szurday (Member for Hungary on the International Cotton Committee and President of the Hungarian Association), General Director of Magyar Pamutipar Rt, Arany János u. 31, Budapest. V.

Rafael Beneveniste, Director, Filtex Rt. Szent Istvan ter 15. Budapest. V.

M. Teltsch.

Ladies :—

Mrs. R. von Szurday.

INDIA.

Bombay Millowners' Association, Patel House, Churchgate Street, Bombay.

H. H. Lakin, "Beechwood," Wilmslow, Cheshire.

Upper India Chamber of Commerce, Cawnpore.

Harry Horsman, M. C., Director, the Swadeshi Cotton Mills Co., Ltd., Cawnpore; 6, York House, Kensington. London. W.8.

BY SPECIAL INVITATION.

Ebrahim Currimbhoy, Director, Currimbhoy Faizulbhoy Cotton Mfg. Co. Ltd., Bombay.

East India Cotton Association, Bombay :—

C. P. Bramble, Director.

Indian Central Cotton Committee :—

G. Boyagis, Liverpool.

Ladies :—

Mrs. Bramble.	Mrs. Lakin.
Miss Hoar.	

ITALY

Associazione Italiana Fascista degli Industriali Cotonieri Via Borgonuovo 11 Milan

Gr Uff Dr G Mylius Via Montebello 32 Milan (Member for Italy on the International Cotton Committee Vice Chairman of the delegation of the International Chamber of Commerce Paris)

Avv Comm G D Delfino Director of the Italian Association Via Borgonuovo 11 Milan

Barone Dr Rodolpho de Parisi Ditta Francesco Parisi Trieste

Barone Francesco de Parisi jr Trieste

JAPAN

Japan Cotton Spinners Association Gosho Building 2 Chome Nakanoshima Kita ku Osaka

K Shimada Mitsui & Co Ltd Royal Mail House Leadenhall Street London E C 3 (Member for Japan on the International Cotton Committee)

NORWAY

De Norske Bomuldsvarefabrikers Forening Drammensveien 4 Oslo

Eduardo Blikstad Nydalens Compagnie Oslo (Member for Norway on the International Cotton Committee)

Gabr Hofgaard President of the Norwegian Association

Hjalmar Johnson

Ladies —

Mrs E Blikstad	Miss Johnson
Mrs Johnson	

POLAND

BY SPECIAL INVITATION

Association of Textile Industries in Poland —

Karol Ender Vice President Krusche & Ender Lodz Piotrkowska 143

SWEDEN

Svenska Bomullsfabrikantforeningen Kanaltorget 1 Gothenburg

Axel Bergengren Director of Boras Wafveri A B Boras (Member for Sweden on the International Cotton Committee and President of the Swedish Association)

Ladies Mrs Ella Bergengren

SPAIN

Centro Algodonero de Barcelona

Francisco [illegible]ives

SWITZERLAND

Schweizerischer Spinner Zwirner und Weber Verein Lowenstrasse 1 Zurich

John Syz Syz & Co Zurich (Senior Past President of the International Cotton Federation and Member for Switzerland on the International Cotton Committee)

Caspar Jenny Fritz & Caspar Jenny Ziegelbrucke (Member for Switzerland on the International Cotton Committee and Member of the Joint Egyptian Cotton Committee)

SWITZERLAND—*continued*

E. Bebié, Turgi.
D. Jenny-Squeder, Ennenda.
C. Leysinger-Eichenberger, Solothurn.
G. Spälty-Bally, Netstal.
A. Spalty-Bartenstein, Zurich.

Ladies.—

Miss Elsa Bebié.
Mrs. E. Bebié.
Miss Rita Bebié
Mrs. Caspar Jenny.
Mrs. D. Jenny-Squeder.
Mrs. C. Leysinger-Eichenberger
Miss Annemarie Spälty.
Mrs. G. Spälty-Bally.
Mrs. A. Spälty-Bartenstein.

U.S.A.

George P. Siedenburg, New York Cotton Exchange, New York. (Representing also the International Chamber of Commerce, Paris.)

YUGO-SLAVIA.

Drustvo Bombaznih Predilnic Kraljevine Jugoslavije, Beethovnova ulica 10/1, Ljubljana.

Andrew Gassner, President, Trzic (Member for Yugo-Slavia on the International Cotton Committee).

Dr. Ernst Zucker, Vice-President, Maribor.

Viktor Anninger, Tekstilno industrijo, Dugeresa.

Ivan Mohoric, Secretary, Ljubljana.

Dr. Felix Haas, Ljubljana.

INTERNATIONAL CHAMBER OF COMMERCE.

Camillo Denover, Legal Adviser to the Futures Markets Committee 4, Rue Sav, Paris.

Owen Jones. British Administrative Commissioner, Rapporteur of the Futures Markets Committee.

Gr. Uff. Dott. Giorgio Mylius, Via Montebello, 32, Milan, Vice-Chairman of the Delegation of I.C.C.

Charles J. Reiss, Chairman of the Delegation of the I.C.C.

Virgilio del Rio, Director of the Finance, Industry and Trade Service, Secretary of the Delegation.

G. R. Siedenburg, New York Cotton Exchange, N.Y.

Heinrich Westerschulte, i. Fa Deutsch-Amerikanische Baumwoll-Import G.m.b.H., Bremen.

John Pogson, Honorary Secretary, International Cotton Federation, 529, Royal Exchange, Manchester.

Arno S. Pearse, Expert Adviser to the International Cotton Federation, Midland Bank House, 26, Cross Street, Manchester.

Norman S. Pearse, General Secretary, International Cotton Federation, Midland Bank House. 26, Cross Street, Manchester.

John Pogson. jun., Assistant Secretary, International Cotton Federation, Midland Bank House, 26, Cross Street, Manchester.

F. Clarke, Official English Reporter, F. W. Tattersall, Mansfield Chambers, 17, St. Ann's Square, Manchester.

L. Mogeon Official French Reporter, 38, Mousquines, Lausanne.

The Causes of the Depression in the World's Cotton Industry, and Means to Overcome Them.

Paper prepared by OTTO BANKWITZ, formerly Managing Director and now Director of Poznanski Cotton Mills Ltd., Lodz (Poland.)

WE need not commence with the stereotyped phrase of a fairy tale: "Once upon a time . . . .," but a reflection of the past of the world's cotton industry might justify such words. We used to speak not long ago of the lucrative and wealthy cotton industry; it was so yesterday, but to-day this affluence seems a mere dream. It is not necessary to be an aged person to have witnessed the steady upward development of the industry and its downward descent. We know that it has all happened, but why and wherefore?

The development took place in a fantastic way such as is often depicted in books that aim at inspiring ambition in our youths. The start was very often the retail shop which flourished, and the idea came to hire a room close to a waterfall or in a flour mill and install a few looms, driven by water power. The number of looms was soon doubled and gradually the small shed became a proper factory. The owner begrudged to pay a profit to the spinner and started spinning the yarn for his own consumption. The undertaking grew and became one of the many large industrial concerns, the admiration of everyone. It required at first initiative, application and a frugal life; the favourable world conditions did the rest.

The industry became located in such districts where water power was available or where coal was near the surface. The development of our industry progressed in relation to the advancement achieved in steam power, the engine and hydraulic engineering. Thus it is no wonder that England was the country where the textile and the machinery industries flourished first of all, and later it expanded rapidly to the European continent and U.S.A. In Europe the industry settled down wherever water power was available, in South Germany, Alsace, Switzerland, Northern Italy, the Alpine region of Austria, the hilly sections on the borders of Bohemia and Saxony, etc. Then it became the turn of the countries favourably situated from a geographical point of view, in order to economize in freight, such as U.S.A., Belgium, Westphalia, India, Japan and China.

One firmly held to the opinion that there was no end to this expansion of the cotton industry, and I well remember expressing my anxiety to an important industrialist at the turn of the century that we had erected too many spinning mills, when he replied that there were by far too few and that the increasing humanity could never have enough cotton clothing; he added that there were many hundred million people in the world who had only just begun to use cotton clothing or did not even know this luxury. During the following decade my friend seemed to be right, but even then some of the countries were visited every now and then by the spectre of overproduction and efforts to export were being made. Good years and bad years came, but nevertheless the analysis of accounts showed on the whole a profitable cotton industry, an industry proud and wealthy, the ambition of many others.

How has this quick change happened? Many attribute the downfall to the Great War and its consequences. We shall see later that the war is to some slight extent a cause, but the main reason for the decay originated before the war. Few regarded seriously the fluctuating years of profit and loss before the war. Then came the war and its necessary curtailment of production. Mankind was being starved of cotton goods, Central Europe had to exist during five long years without receiving a single bale of cotton, and yet we lived. But when the frontiers were reopened everybody was frantic to satisfy that hunger for cotton goods, and this produced the excess of demand. Our industry revived once more, but the downfall of the currencies of a few nations soon put a stop to the excess demand. Nevertheless we, on the Continent, had no reason to complain seriously during the years of 1920 to 1928, as, on the average, the lean years were made up by years of plenty, yet more and more anxiety as to the future made itself felt.

Since 1928-29 we have faced a crisis such as the world has never experienced. In order to withstand competition we sacrificed more and more. We sold cheaper and cheaper. A profit was non-existent. First we omitted to write anything off, then we did without calculating interest on the capital invested. Finally our clients insisted on larger credits, and we spinners granted them foolishly, lest our competitors might get the business, and by and by we omitted to charge interest for these credits, with the result that they became bigger and bigger. The industrialists were not lacking in efficiency, they invented new ideas, tried to economize through that blessed method of rationalization, and, in short, they did everything to stop the losses. The falling price of cotton, which in the course of 10 years came down from 36 cents to 6 cents, was also a cause of many a cotton manufacturer losing his whole capital in consequence of high-priced stocks which he was forced to make. Some had recourse to speculation as a means of getting even. The selling price was always below the cost of production. It is true most of us were ashamed to confess this, particularly those who were forced to borrow money. Thus it has come about that nearly all the rich industrialists have become poor, many have lost their entire fortunes, some just exist, and others are following the same road of ruin. Yes, we might have started with the introductory words: "Once upon a time."

But why does not this crisis which has now been with us for the last four years not come to an end and make way for better times? It was always so in the past.

Europe and U S A are the continents which suffer particularly from unemployment That is surely to be attributed to the steady expansion of mechanization, which has caused displacement of labour through the powerful movement of rationalization, or shall we say Fordism " As the number of unemployed increases the number of clients of the cotton industry decreases, for all unemployed or the partially employed begin to economize in clothing

Of course as far as Central Europe is concerned, the war has also to account for the crisis, for it is proved by statistics of what devastating influence has been the fixing of the new frontiers, taking away from entire centres of industry their former outlets

But my investigations have led me to the conviction that the main cause of all our troubles must be attributed to the migration of industry from Europe and U S A to Asia and I fear that Africa will follow the lead and start a cotton mill industry That transfer of mills to Asia is an irreparable loss to Europe, and the sooner we realize it the better for us

I shall introduce as few figures as possible in the course of my paper I refer those who care to study the exhaustive statistical material which I had to compile for the purpose of preparing this treatise to the fuller edition, issued in the German language The statistical tables in that book, although printed in German, will be comprehensible to the English and French-speaking nations I omitted them from this paper because most of you are conversant with these statistics, and the printing of such tables is always expensive, moreover in a discussion statistics are difficult to grasp I think I can claim that the study of the statistics of consumption, spindles, working hours, exports and imports, etc , have brought me to a logical conclusion, which others have reached perhaps in a more empirical manner, through personal visits to Asia or reading reports of the industry there

WHY HAS THE WORLD S CONSUMPTION OF COTTON FALLEN OFF ?

The world's consumption of all kinds of cotton amounted to —

1912 22 818 000	1913 25 096 000 bales	
1920	20 850 000 bales	
1921	17 665 000	
1922	21 165 000	
1923	22 076 000	
1924	20 450 000	
1925	23 214 000	
1926	24 681 000	
1927	26 141 000	
1928	25 540 000	
1929	25 786 000	
1930	25 209 000	
1931	22 488 000	
1932	22 377 000	
	22 895 000	Average 1920 to 1932

The world's population has increased in that period by 1 7 to 2 milliards of people That means the consumption at this ratio ought to have been by now at least 27 million bales, but instead we see that the consumption of 1931-32 has fallen to 22.4 million, and that the average for 1920 to 1932 was 22.9. The temporary increase of the years 1925 to 1930 was probably the consequence of the decrease of previous years.

We all know that artificial silk has become a big competitor to cotton. Fashion of the last few years has also lessened the consumption, and during the last three years the crisis has done its share. And all this falling-off happens at a time when still millions and millions of people hardly know what cotton clothing means and when prices of cotton goods are on as low a level as ever. We must be content with the consumption as it is, because, after all, it is more or less on a par with pre-war years, but then the question must be asked: Why has the world increased its spindleage from 143,449,000 to 161,016,000?

Europe has increased only	by	1,937,000
Asia „	by	12,311,000
South America „	by	2,203,000
Sundry countries	by	1,116,000

That shows that the world, outside Europe and U.S.A., is striving to become independent of the ancient seat of the cotton industry. A more telling comparison is the consumption. In 1913

Europe	with	99,505,000 spindles	consumed	12,082,000 bales
Asia	„	9,084,000 „	„	4,065,000 „
U.S.A.	„	34,260,000 „	„	6,565,000 „

whilst in 1932 the figures were:—

Europe	with	101,442,000 spindles	consumed	8,672,000 bales
Asia	„	21,395,000 „	„	7,723,000 „
U.S A	„	36,403,000 „	„	5,667,000 „

The rising chart-line of Asiatic consumption (+3,658,000 bales) is balanced by the decreasing line of Europe's falling consumption (-3,510,000) in almost exactly the same ratio.

Every year Asia's industry is expanding at the average of 250,000 to 300,000 bales, and the time is not far distant, two to three years at the most, when Asia's cotton consumption will be equal to that of Europe.

Who would have thought in 1921, when U.S.A., with 39,959,000 spindles, registered a consumption of 5,564,000 bales, and Asia with 12,689,000 spindles 5,447,000 bales, that in the short space of time of 11 years Asia would have surpassed U.S.A.'s cotton consumption by more than 2,000,000 bales?

What is going to happen if Asia proceeds to develop at the same rapid pace as in these years? Must we expect in that case that the tables will be turned and Asia will supply Europe with cotton goods?

Before the invention of textile machinery Europe bought their cotton goods in Asia, where cotton-growing and hand spinning and weaving had become a formidable industry. After the invention of textile machinery, Europe, particularly England, sent cotton goods to Asia, but now statistics indicate the possibility of a return to the original times. As regards the Near Eastern markets, Japan has already the lion's share.

Of course, it is quite comprehensible that Asia, in consequence of its efforts to obtain independence, has added more and more spindles and looms. This process will continue as long as there are possibilities of finding an outlet for their products in Asia, Africa and Australia. We must reconcile ourselves to this fact.

Why Europe, in face of her falling trade, should have erected new spindles is incomprehensible.

France	has added	2,774,000	spindles through the Peace Treaty
Belgium	,,	664,000	,,
Italy	,,	792,000	,,
Holland	,,	734,000	,,
Canada	,,	379 000	,,
Mexico	,,	130,000	,,
Brazil	,,	1,490,000	,,

We can therefore reply to our question succinctly in saying that the creation of new spindles is to be explained by the aims of many nations to become independent from the old suppliers of cotton goods, and is not accounted for by any present or probable future demand. This must mean a serious loss to the old industrial countries.

WHAT ARE THE MOTIVES FOR THIS OVER-PRODUCTION?

Formerly the choice of erecting a spinning mill was dependent on the supply of power, but the supply of dextrous trained labour was also important.

As long as the bulk of the yarn produced was spun on mules, specially trained workpeople for attending to these complicated machines were necessary. Thus it came about that mainly England, Germany, France, Austria and Russia were the countries where spinning mills became centralized at the start, and the expansion followed in the same countries. These early mills had no difficulty in finding a market for their yarns. What they could not sell in their own countries found a ready sale in those countries which were of an agricultural character, and thus developed that natural exchange of goods between industrialized and agricultural nations.

Even in 1913 the number of mule spindles was 52 per cent. of the world's total; to-day the percentage has gone down to 34 per cent., but if we take into consideration that mule spindles work a larger proportion of short time while the ring spindles are working double shift, we are on the safe side if we maintain that the equivalent of active mule spindles in the world is to-day only about 15 per cent.

Just as the mule spindle began to be pushed out of existence by the more easily worked ring frame, so the industrial birthright of the old countries ceased to exist. The spinning industry spread, in consequence of the facility with which ring spindles are attended, to such countries which, owing to lack of suitable labour, would never have dared to have worked mules.

The statistics of the International Cotton Federation prove that those countries which have recently taken to spinning possess only ring spindles, whilst the pioneer countries of the industry are the unfortunate possessors of the mules, which produce a kind of yarn that is required only for certain kinds of cloth.

During the last few decades power production by steam has made enormous strides and replaced water power to a great extent, which at the best was unreliable and always costly to maintain, That meant that the choice of a site for a mill was no more dependent on the supply of water, but became a question of the supply of coal. A steam turbine with an electric power station, or connection with the central electrical station, is to-day comparatively cheap and simple to work. Whilst formerly industry sought out even such unsuitable districts as Central Europe merely because there was available a good supply of water, whilst otherwise from a geographical point it was bad for the distribution of the goods and the transport of raw material, to-day the main attention is given to the geographical propinquity, the easy access for raw material and the distribution of manufactured products.

The balance of trade is also of importance as a study of exports and imports will show. If we consider those countries which are purely consumers, or at least only small producers of textile goods, we find that the imports of all textile goods (including wool) represent roughly the following percentages:—

Sweden ..	18 to 20	per cent	of total imports	(after the war)
Denmark ..	16	„	„	„
Norway ..	15	„	„	„
Bulgaria ..	33 „ 40	„	„	„
Jugo-Slavia	30	„	„	„
Mexico ..	12		„	„
Argentine ..	22	„	„	„
Australia ..	25 „ 26		„	„
Algiers ..	16	„	„	„
Morocco ..	12 20	„	„	„
Tunis .	18 „ 20	„	„	„
South Africa	25 „ 27	„	„	„
Egypt ..	26 „ 29	„	„	„

The imports of *cotton goods alone* were in

Roumania	26	per cent	of total imports
Canada	17	„	„
Turkey	24 to 30	„	„
Dutch East Indies . ..	21 „ 25	„	„
Persia	14 „ 22	„	„

Textiles represents, therefore, a very important item which goes to increase the debit balance of a nation. It was formerly very much like this with other countries which are no more in this list, for instance India, Japan, China, Brazil and a few other South American Republics which have become more and more independent of Europe. A glance at the table showing the number of spindles of each country per 1,000 inhabitants is rather instructive. England had in 1913 1,242 spindles per 1,000 people, to-day she has 1,140, whilst for the whole of Europe the figure is unchanged, viz., 218, but for Asia it has risen from 12 to 22.

Many countries, with a view to encouraging the establishment of cotton mills, offer special inducements, subsidies, free land, immunity from taxation for a period of years, etc,

The main inducement for the erection of national cotton mills is the creation of high protective duties. Unfortunately the disadvantages of this policy are seldom realized. These countries used to barter for their agricultural produce all kinds of manufactured goods. It was this exchange which was the basis of all commerce. To-day the people are astonished at the lessened sales of their produce, and do not realize that it is due to their efforts of industrialization. We see glaring examples in our midst, in Europe, where the hitherto agricultural countries—Hungary, Jugo-Slavia, Bulgaria and Roumania—are becoming more and more industrialized. We must not be astonished if other countries which are still agricultural gradually become industrialized in the near future. A cotton mill with modern machinery is probably one of the easiest worked factories, and, as everybody uses cotton, it is a cotton mill that is a start on the road to industrialization. The peasant is anxious to go into the mill or is being forced to take up mill work in these countries, but on the other hand the mill workers of the old industrialized countries are now driven back to the fields.

As long as excessive competition forces the producer to sell his textile products below cost of production, the consuming markets have the advantage, as they are being overwhelmed from all parts with ridiculously cheap offers of cotton goods, much lower in price than they would cost if they made them in their own country. But the end must come; the biggest reserves in this way become exhausted. The wealthiest industrialist becomes a pauper if he continues to sell his goods below cost of production. But if our industry in the old centre should be able to earn even a meagre profit, the hitherto consuming markets will turn to spinning and weaving under the protective wings of a high tariff.

Does anybody believe that Europe will ever again play such an important part as exporter as she did 20 or 40 years ago? A perusal of the cotton statistics gives a decided negative answer. Europe is handing over her export trade, bit by bit, to her clients abroad, and it cannot possibly return. Even U.S.A., which has reasons to calculate with increasing consuming power within her own boundaries, will have to fight for her existence. Europe and U.S.A. have during the last 50 years supplied the industrially backward countries with their products, and, what is more, they have instructed these people how to produce the goods, and sold them the plants to enable them to produce the very goods they used to export to them. We cannot change this now. We have to be content with the leavings. We must, however, take care that no further inroads are made in our trade. The countries which so far have not yet a cotton mill industry may, and probably will, follow the example of India, Japan and China. That is merely a question of time.

I am classifying the countries into five main groups as follows:

(1) *Great Britain* forms a separate whole; it comprises with 52 million spindles almost a third of the spindleage of the world, although 8 million spindles would probably suffice for its home requirements. Great Britain is therefore forced to export in very large quantities, and in consequence of the migration of mills Great Britain has had to suffer more than any other country; her consumption of cotton has been reduced by almost two million bales, a very formidable quantity, just because her exports had shrunk. As

England exports higher counts than any other country, this lessened consumption represents a very large number of idle spindles.

2. The other European countries comprise also almost 50 million spindles, and have lost through falling exports almost 1.2 million bales in their consumption. That loss is distributed over a number of countries, for, in the main, each one is first and foremost concerned with supplying goods to the home market.

3. *Russia* comprises 9.2 million spindles, and occupies a position of its own. It consumes its whole production, made almost entirely of home-grown cotton, and does not export or import. In recent years Russia has exported some printed cotton goods to the Near East (Egyptian) and to Afghanistan; some have even reached the northern parts of India. Russia could, and no doubt will, some day use more cotton goods per head of population than she does now. Many Continental industrialists had hoped that the Russian market might again absorb textiles from abroad, but these expectations are now shattered.

4. *Asia* forms a group by itself. Asia is the continent which represented until recently the main export market, but in a comparatively short period it has gained its independence and is encroaching on other markets.

We cannot judge the three Asiatic cotton mill countries on the same basis. Asia is witnessing within her borders a smaller competitive fight just as we have reviewed it from the world's point of view. The oldest industrial country of Asia, India, has been pushed into the background, although her spindles and cotton consumption (+523,000 bales) have progressed. Japan has been the conquering hero with an increase of consumption of 1,181,000 bales of cotton. The progress of China is at a more rapid pace, for her consumption has risen by 1,950,000 bales (partly due to the Japanese, who own a third of the mills of China). The cotton industry in Asia has expanded in geographically well-defined districts. Japan has outstripped India owing to the double-shift system, which is universal throughout the country, whilst in India it is still only practiced on rare occasions; the superior labour in Japan has also contributed to her victory. China works 132 hours per week, and is likely to add many more spindles.

Japan's efficiency has forced India to introduce heavy tariffs against her goods, thus we have in Asia a repetition of European conditions.

The striking fact in connection with the Asiatic cotton industry is that, in spite of the 21½ million spindles, representing only 13 per cent. of the world's spindleage, she consumes more than 34 per cent. of the world's cotton crops. This is accounted for by the forced exploitation of the mills, and we shall see later what effect this has on the world's competition.

5. *America* is the fifth separate group. There have been considerable changes within the last 20 years, and to-day North and South America own 36½ million spindles. Canada and Brazil have added new spindles, Colombia and Peru have started mills. Here again is the example of establishing new mills in the countries

which were big consumers of cotton goods. The spindles of America suffice for her requirements, and U S.A. ought to be pleased that the number of spindles within her boundary has not increased. Though U.S.A. has lost a good deal of her exports, she has such a rich home market that the loss of the export trade is not as serious a matter as with us in Europe. The migration of mills from the north of U.S.A. to the south, nearer to the cotton fields and to cheaper labour centres away from interfering trade unions, deserves to be mentioned.

The sixth group consists of Africa and Australia, where so far only very few cotton mills exist, and these continents represent therefore purely consuming markets.

Groups 1 and 2 (Great Britain and Europe) are in the greatest danger.

America (Group 5) has the possibility of maintaining its position.

Russia, the third group, is so far a walled-in entity.

The fourth group, Asia, has upset the equilibrium, and, particularly, Japan has become the *enfant terrible* in the family of the cotton industry.

We can perceive in the international competitive combat between the individual countries the same phases to which we are accustomed in our daily strife with our national competitors in the home market. As soon as over-production begins, selling prices are lowered. Some firms stand for curtailment of production as the selling prices are no inducement to work, or because they have the sense to see that it is fatal to increase over-production still further. Again others begin to economize in all directions and have recourse to rationalization. (I may be allowed to say that all my life I have been rationalizing in some way or another.) When these economies are of no more avail, wherever possible, the mills resort to the double-shift system, but, of course, the discrepancy becomes still more formidable through this measure, as we shall shortly see. Some work double shifts whilst others are not able to run their mills even half-time. It is exactly the same in the case of individual countries. Before the war single shifts were the rule, although even at that time Japan used to work day and night. We did not pay attention to this fact before the war, as we considered Japan's 2.3 million spindles harmless, but now, when she has 8 millions running in double shift, the additional consumption of cotton is an important item, particularly as the cost of making goods out of this cotton is a very low one. Japan and India have been in a tariff war for years, and in this connection I invite reference to the book "The Cotton Industry of India," by Arno S. Pearse, published by the International Cotton Federation.

During the last fifteen years a still more formidable competitor has arisen in Asia, viz., China, which it seems to me will some day outdistance Japan and India. Perhaps this competition will force India to the double-shift system. The consequences of such a step would indeed be devastating. Let us hope India will be satisfied with the Ottawa Agreement and her high protective duties.

America has been able to run her mills during the depression almost on a single shift system though in normal times quite half of the machinery particularly in the south runs a double shift U S A some day may have to face the cheaper imports from Asia but in U S A it is easy to increase the custom house tariff and fortunately for her there are not too many mills and thus a remedy may be found more easily All that is required is an agreement amongst the national mills as they are almost exclusively cut out for the supply of their domestic requirements

Europe and particularly Great Britain are as a whole destined to work short time which means producing at increased cost

After carefully examining the statistics I have come to the conclusion that the world s total spindles have worked throughout 1932 only 39½ hours on an average The following are the essential facts of employment —

30 hours and less	Great Britain France and Czecho slovakia
30 to 46 hours	the other European countries
46 hours and more	Russia Italy Spain Sweden Norway Denmark and Hungary
48 hours	the American mills
60	Indian
102	Japanese
132	Chinese

WHAT ARE THE CONSEQUENCES OF THIS UNEVEN WORKING WEEK ?

Let us suppose that

1 In a country the normal demand is 100 per cent of the employment of all spindles

2 That this country s needs are supplied by ten equally large mills

(3) That the cotton value per kilo yarn (inclusive of freight and interest on capital employed) is 25 American cents

4 That the selling price of a kilo of yarn 24 s is 41 cents

A study of the spinning costs for a 100,000 spindle mill as per details in the statistics of the German edition will show that the spinning cost for 24 s are in the case of —

Employment of per cent			Without calculating interest and depreciation per kg	With calculating interest and depreciation per kg
A	50	half employment	13 32 cents	22 45 cents
B	75	three quarter employment	11 82	17 87
C	100	full employment	10 99	15 54
D	200	double shift	9 80	12 42

Let us impress ourselves with the following important facts The cost of the yarn under conditions of full employment of 48 hours per week is 15 54 spinning cost plus

25 00 raw cotton

40 54 cents add to this a profit of about

46

41 00 cents selling price

Suppose now the case that one of these mills is no longer satisfied with this profit. The management argues that the lower cost of production with double shift, which is 3.12 cents per kilo less, multiplied by the double output, should be made available to the shareholders. That represents a gain of about $200,000 per annum, which is, of course, tempting.

In order to avoid over-production for the country, two of the remaining nine mills ought to reduce their output by 50 per cent. If they do that the selling price will still remain 41 cents, but

(D) 1 mill working double shift cheapens its production to 25+12.42=37.42 cents per kilo.

(C) 7 mills=100 per cent. employment with normal cost: 25+15.54=40.54 cents per kilo.

(A) 2 mills=with half the normal production have a cost calculation of 25+22.45=47.45 cents per kilo.

The mill D is not going to be allowed by its competitors to enjoy this advantageous position for long. Another mill decides to start on the same game. The result, if no over-production is to be made, must be that four of the mills voluntarily curtail their output by 50 per cent. In actual practice that would not happen; the curtailment would be spread over the remaining eight mills, but although they would not curtail all at the same ratio, we will suppose that mills distribute the burden equally on their shoulders. The result would be:—

(D) 2 mills, double shift, 25+12.42=37.42 cents per kilo.

(B) 8 mills, three-quarter employment, 25+17.87=42.87 cents per kilo.

In actual practice the curtailment would not be on a uniform basis: it would vary down to 50 per cent.

As long as the selling price remains 41 cents the misfortune is not serious, as the mills under C have still half a cent profit, but the mills B have 2 cents loss, and probably they will write off less than normally, but the case of mills A is worse, for they show already a loss of 6½ cents per kilo. They console themselves by stating that this loss is not so large, as it affects only half the output; they will have to do without any depreciation and without providing interest on capital invested.

The point to consider is that the surplus production is hardly ever balanced by a curtailment. Probably a third mill would start double shifts, and none of the other mills will decide on a lesser production; they will adhere to their former output as long as ever they can do so.

We see how over-production and all its consequences arise. The extra quantity produced brings the price down to 37½ cents. Why to this figure? Because that price would cover the bare cost for the mills working double shift, including depreciation and interest. The extra profit has disappeared long ago.

The mills C lose depreciation and half of the interest;. mills B lose depreciation and all the interest; and mills A lose depreciation, interest, and make a present with the sale of every kilo of yarn.

Those who are working with borrowed capital, and not with their own, take fright first, because they cannot earn the money to pay the interest on their debts. Those who work with their own capital witness a gradual decay of their mills, and they all start on the well-known *race of rationalization*. No doubt something will be achieved by it, but not for long. There are, of course, primary differences in the cost of production in all mills, even of the same size and producing the same yarns, which can mostly be traced to antiquated machinery or geographical reasons; it is seldom that the management is inferior. The millowner which has the cheapest cost is willing to sacrifice another cent. He hopes to get more orders, and thus to recoup himself through the larger output. More and more mills go over to double shift in their desperation, a fourth and a fifth mill start on the same game, and we have not only the competition of mills D with double shift against the mills C, B and A, but the double-shift mills begin to fight amongst each other for business. Thus we again have the old story: First sacrifice of depreciation, the price falls to 36 cents, then they make a present of interest charges to their clients, and they arrive at a selling price of 35 cents. This barely covers the cash outlay, even in mills working on double shift.

Competition at the present time is even keener than this. The double-shift output has to be got rid of somehow, and recourse must be made to forced sales. Thus it happens that one sells to concerns which are not financially strong, or one sacrifices general expenses in the cost calculation, arguing that they would continue if the mills had to close. Thus the price falls to 33 cents and below.

The end is in sight—the mills working short time are losing more and more, but the double-shift mills too are sacrificing, one more than the other. The first suspension of payment created some surprise; people said how is it possible for such a mill to have lost all this money in a few years. It was such a wealthy concern not many years ago. My introductory remarks apply again: "Once upon a time," etc.

THE UNEQUAL WORKING HOURS FROM MILL TO MILL AND COUNTRY TO COUNTRY ARE OF PARAMOUNT IMPORTANCE IN THE DISCUSSION OF THE CAUSES OF THE PRESENT CRISIS.

In this connection I may draw attention to a difference in pre-war and post-war working hours. In pre-war days we had mostly the 60-hour week, after the war the 48-hour week. The shortening of the hours of work has facilitated enormously the introduction of the double shift. To-day it is easy to organise a mill on a two-shift system of eight hours each, and that facility has been a very important inducement to the unequal employment.

The same consequences which we set forth in the competitive combat between individual firms apply to the countries and continents where the mills run different hours, and these are very marked between Europe and Japan and China. Every country aims at making rapid strides, just as every mill, without taking any notice of what is happening to the others.

The desiderata is: Let me work in double shift, and my confrère must curtail 50 per cent.

It is all very well to say: Let efficiency go ahead! That is all right if the world's conditions were equal. Are we quite sure that efficiency alone will lead to success? Unfortunately, many are convinced of their own efficiency, and wait until the competitor is down and out. They forget that their efficiency suffers also in this combat, and that although their confrère may be pushed aside, yet the plant which he owned is still in existence. All such mills are an immense danger to the rest of the industry, because in most cases they come to life again under much more favourable conditions than previously.

If we allowed all efficient millowners to go forward unimpeded the whole world would soon work double shift. Just realize what it would mean; the mills of the world consuming 35 million bales whilst the world cannot consume in cotton clothing more than the equivalent of 22 million bales. The world's spindles could produce the necessary yarn out of 35 millions; they could eat as much raw cotton, but the world cannot digest more clothing than that represented by 22 million bales.

HOW CAN WE MEND MATTERS?

This is the question which has been put many thousand times, but the reply is difficult, or rather the execution of the necessary measures is very difficult indeed.

(1) There are many more spindles in the world than necessary, for we have seen that a working week of 40 hours on an average would be enough—uniformly carried through in the whole world—to produce all the goods needed.

(2) The 40-hour week would be no mistake, as it would prevent a great deal of unemployment, but it would have to be universal in the literal sense of the word.

(3) It would be necessary to avoid different degrees of employment, for we have seen the fatal results that are sure to arise if any differentiation is allowed.

(4) That means that the employers must come to an understanding amongst themselves.

No doubt some there are who prefer the natural healing process, in other words, "survival of the fittest." Our method is an organized plan, and that has many opponents at all times, and I must confess that personally I am not an ardent adherent of organized economics, but when I am ill I have to go to the medical adviser, and I shall have to follow his prescriptions, however disagreeable they are. Everybody will agree that the whole of our industry is to-day seriously ill, as the fever-chart and the many deaths illustrate.

If our industry hopes to find the solution to the problem by adhering to the policy of the survival of the fittest, the following is bound to happen:—

(1) The industrial undertakings will not disappear, but their ownership will change.

(2) The lender of money and creditors in general will lose their money, and, if all goes well, they become the new owners of devalorized mills.

(3 The State will lose taxpayers

(4 The consumers will hardly benefit through the cheaper prices of cotton goods sold below cost as they cannot expect a continued cheap supply and because the difference in retail prices for an article would be infinitesimal and the advantage would not be felt by the individual consumer whilst of course the small loss per article multiplied many thousand times makes all the difference to the industrialist whether he can or cannot exist

Let us therefore leave aside the arguments whether organized efforts should be followed to set the house in order or whether the natural method of survival of the fittest should be applied Let us rather consider whether the execution of the above four replies is practicable

(1 There are undoubtedly more spindles in the world than required by the people Unfortunately we must face the fact that still more spindles are going to be erected for we have seen that the desire of the agrarian and colonial countries is all for becoming independent of old suppliers of cotton goods The tendency in most countries is to become more and more self supporting and these efforts will be translated into the building of new mills That must mean a further shrinkage of the exports of cotton goods from the old industrial countries

For that reason these old industrial countries ought to con centrate with all energy on how to get rid of the surplus of spindles and to set their tumbling mills in order

An improvement is only possible if an organized system is applied to scrap the surplus of spindles England has been forced to make a beginning In 1913 her spindles were more than 58 millions to day she has only 52 and efforts are being made to scrap several millions more

It is no use waiting for the painful process of survival of the fittest to have its sway Mostly old spindles would be affected but they can be had for nothing and in order to make up for their insufficient output the new owner generally resorts to working them on the double shift They are therefore dangerous enemies to the other mills but one ought to be able to find a formula according to which their value can be assessed and be bought by the com munity with a view to breaking up the machinery

We must avoid with all our might the erection of new spindles Of course some will reply that a country which follows such a principle would for years to come be unable to profit by the advantages resulting from new inventions We must avoid that First of all we must consider that during the last few decades old mills have either exchanged the old spindles for new ones or they have rejuvenated their mill in such a way that only a part of it may be considered old The buying up movement of decrepit mills might also undertake to shift the good machinery to other mills i e selling it on long credit terms to those which require the good frames Thus only the worn out inefficient machinery would be broken up That would have the advantage that the remaining mills would be better placed to enter the export trade Of course finally, when we have set the house in order one can begin to think of buying some new machines to renew or replace less efficient ones.

A country which has 70 badly employed mills will probably be able to scrap 15 to 20 old mills, and to reorganize the remaining ones without causing a loss to the owners. Perhaps some will say that I have left out of consideration the operatives who become unemployed through such an action. If we proceed to a properly organized shutting down of the mills, i.e., if we distribute this pruning down evenly, the operatives will not suffer, as it is not a question of taking work away, but to build up the industry in such a way that more constant work will be available.

(2) To my mind, the 40-hour week would not be a mistake. Although I am a partisan of the 40-hour week, I am not going to place before you the reasons pro and con, but will merely say that if a country has so little food for its population that some of them are threatened with starvation, there is no other way but to ration the food. We are all acquainted with the rationing of food from war-times, and though we may all think with terror of the drawbacks which rationing brought with it, yet we all realize that it was the only way to help us out of the difficulty. It is just the same with work. If there is not sufficient work available for all the people, it must be rationed. If we had not concentrated so much during the last decades on rationalization, but had adopted a sane way of rationing, we would not be in the present plight. Emergency relief work is excellent as a temporary expedient, and is always preferable to unemployment pay, but the time is near when our roads and waterways will be built on a large enough scale, and when we must ask ourselves the question, why increase the means of communication as long as there is no prospect of increased traffic? I do not think that any other remedy exists but to ration work. You will say that the spinning mills are doing this already; yes, but not on a uniform plan. There is not only a lack of work for the operative, but also for the spindles, therefore the industrialist as well has an interest to ration. You will no doubt say that the 40-hour week is feasible only if it is applied internationally. Yes, if it is a question of export trade, and I shall revert to it when dealing with exports. It is not of such importance for the home market if the industry comes to an agreement to work only 40 hours. Of course, it would be better if this matter could be dealt with in harmony with all industries; though at present that necessary understanding between industries is still lacking, yet why should not the cotton industry take a lead in this problem, as it has done often enough in other questions?

(3) The unequal occupation must be avoided.

Although it would probably be impossible to enforce throughout the world an equal degree of employment, an effort should be made to start the movement within the national boundaries. We are not far removed from such measure being introduced, for we read first of this, then of that country, of negotiations taking place to adopt a quota system, or of price-cartels. In some countries such agreements have been reached; for instance in Czecho-Slovakia, Austria and Poland. In Germany the pourparlers have started, though a uniform execution is still in abeyance. Negotiations in this direction are going on in Italy, and in quite a number of other countries.

At the present time uniformity of action is still wanting, and it will soon become evident that agreement will have to be reached not only within the national limits but within groups of countries which will form a community of identical interests for the purpose of dealing with the quota system. Therefore it would be an advantage if the different agreements relating to curtailment of production, quotas, price-cartels, and whatever other names they may have, be built up as far as possible on a uniform plan. I lay stress on the words as far as possible, because I know from my own experience—which extends to administration of mills in three countries—that these agreements have to be built up from the individual point of view.

The main points in arriving at these agreements are: whether the country is chiefly exporting or whether it is mostly supplying the national needs, whether there are many combined spinning and weaving mills, and finally in what ratio the number of spindles is to the home requirements.

We have had excellent experiences with the so-called spinners' cartel in Poland, where I assisted at the birth of three cartels (including a price-cartel) until the present organization was built up, in which all the mills of the country, without exception, are members. As it works splendidly, I am induced to sketch out a general scheme on similar lines which might be useful to other countries.

First of all it is necessary to establish reliable statistics of production, the own-yarn consumption of combined spinning and weaving, the consumption of the home market and of foreign clients, of sales made ahead, of stocks and shipments. The regulation of an industry can be undertaken only after one has obtained these data, otherwise it is impossible to balance supply and demand. The main object must be to produce no more for the home requirements than is absolutely needed for the consumption of the population.

Consumption figures fluctuate, of course, according to fashion and season, and according to the spending power of the population, but all these items can soon be gauged. It is easy to assess the quota on the basis of stocks and consumption. As a unit in calculations "spindle-hours" (spindles multiplied by hours) should be used, as they reflect the state of the individual mills. A badly managed mill will produce in 100 spindle-hours less than a well-managed or a new mill, and in this way one avoids the disputes which otherwise originate when fixing the basis-quota. But in actual practice the fixing of the quota is not so easy, even with the help of spindle-hours, for there will always be so-called exceptional cases which are supposed to be reasons for allowing this or that mill a higher quota than fixed upon. But then there are also mills which will be willing, against payment, to work fewer hours. In our Polish spinners'-cartel we have found that a "spindle-clearing-house" was the best way out of the difficulty. This consisted simply of the Association renting all the mills which had to be stopped and their quota of spindle hours was placed at the disposal of those mills against payment of a fixed price which had to work longer hours or felt inclined to do so Then we instituted from time to time a voluntary clearing which was adjusted by the Association against payment of a small commission it worked in this way that those mills which wanted to work fewer hours in a certain period placed the equivalent spindle hours at the disposal of the Association which fixed the price and then sold the spindle hours to those mills which wanted to work longer In this way we got an equalization between decreased and increased production and we maintained the principle of uniform employment

The fixing of the quota is undertaken periodically—every fourth week The committee considers the matter two or three weeks in advance and decides on the lines explained Every spinner knows in advance how much he may produce in the next period and must adjust his working hours accordingly

The figures of production and stocks are collected weekly and every member is informed weekly of the actual state of affairs

The production for export is not licensed every mill may produce as much as it will but it is also under some supervision

The problem of combined mills (spinning and weaving in one firm) is always difficult to solve as these do not sell their yarn in the open market as soon as the state of trade improves but as soon as there is a falling off they stop looms and sell the yarn There are however also means to bring about a fair basis of distribution

I do not think price cartels are necessary if proper quota agreements exist and it is by far better to allow prices to develop in the natural way Prices depend on so many circumstances—competition from abroad protective duties and many other factors The grading of the different qualities is difficult unfair mean to overcome price agreements are plentiful and the accusations that are sure to arise will cause disputes amongst the members who just at a time of crisis would create strife whilst confidence and harmony are essential assets for the success of such a scheme

(4) The main requirement is an agreement within the industry It is difficult to achieve as in every country there are individual firms which consider it correct that their competitors should participate in some scheme of curtailment but they wish to have perfect liberty of action and profit by the short time movement of others by working perhaps double shift There are ways and means of making the life of such selfish people difficult and in those countries where I have helped to organize the movement we have finally succeeded and now we have the fruits of the victory and the certainty of steady working of the mills in accordance with the needs of the country

Believe me if I say that the interest in favour of quota agreements is growing but we ought to see the efforts materialize more rapidly

I consider an agreement between the different countries more difficult and an agreement between continents such as Europe and Asia seems impossible *at present* We can hardly hope that Japan and China will willingly on their own initiative give up their double shifts in order to help Europe and U S A to a more uniform distribution of orders but India has perhaps shown the way how to get these countries to come into line India has argued that the working of double shifts in Japan is an unfair advantage over the Indian mills and that consequently Japanese goods must pay a correspondingly higher duty If other countries follow this example perhaps Japan will on her own initiative abolish this so called unfair advantage because she knows that her cotton industry cannot exist if every country puts up prohibitive tariffs against those who will persist in working double shift The efforts of the employers in the direction of suppressing double shifts would be supported wholeheartedly by the trade unions

As pointed out before there are some principal groups of countries which are suited to co operate owing to the existence of equal conditions

Great Britain and her Colonies is a group by itself Great Britain aims at securing through the Ottawa Agreement the home market and that of the Colonies which will be a partial help But Great Britain and India will have to export nevertheless How far they will succeed in their exports must depend on their ability to compete with Japan and China Meanwhile Japan is making steady headway European competition is not so important for England because the Continent suffers from similar evils to those of England and has not any advantages in the cost of production If England were not mainly an exporting country it might even join the Continental group

America must be treated separately because she has practically no competitor within her own market which assures full employment of the mills America is not dependent on exports especially if Canada and the South American Republics refrain from putting up new spindles Because America has an assured employment for one shift a uniform organization of employment ought to be feasible All that requires to be done is for the spinners to come to some agreement how they are going to distribute any increase in demand which may arise and how the orders for export are to be handled

Asia is a chapter apart we have already dealt with this Continent India with her 60 hours and her incapable operatives is at a great disadvantage against Japan s 102 hours and China s 132 An agreement between these countries is very desirable otherwise India might resort to double shifts It is however not to be expected that such an agreement will be possible in our life time and Asia will together with the various islands and East Africa remain the section of the world to which everybody aims at sending the surplus of cotton goods unless the Ottawa Agreement puts a stop to this

It seems to me that it will be necessary to let Asia alone for a time in order to allow the export disease freedom of expansion perhaps after a while there will come insight and an agreement Of course we may have to reckon with a similar expansion taking place in Africa for the industry has started in Egypt

Russia must also be treated by itself There is so far no over production; the industry is owned and managed by one central organization. The population can consume everything which the industry produces, but the Government uses part of the cotton goods for procuring foreign currency and sells some of the mill's products abroad, whilst the population must go about badly clothed. The country is enormous, and has great possibilities of development; the nation need not protect herself against undesirable imports. In view of the organized programme of the U.S.S.R. it may be anticipated that not only will the raw cotton production be increased beyond the limits of what is needed for the Russian industry, but also that the latter will export "at dumping prices" the surplus of cotton goods, which are already a well-known feature of the U.S.S.R. programme; indeed a beginning has been made in this direction, particularly in Egypt, where some Russian goods sell cheaper than Japanese. Some day Russia will swamp the European markets, unless we take protective measures against dumping. One thing is certain, Russia will want to be left alone to work out her own salvation as best as it may seem to her dictators. We may therefore be prepared to witness surprising actions from that quarter.

Europe seems predestined to make a beginning with a purely European agreement.

The European countries, the whole Continent, suffers more or less from the same causes; statistics prove that they have all suffered to a similar extent. The European countries where a cotton industry is established, cannot even reckon those European countries which are exclusively agrarian as sure clients in the future, certainly to no greater extent than the equivalent value of their exports of agricultural produce to those cotton goods producing countries. It is true the amount of employment differs in the various Continental cotton countries, but the more important ones are similarly situated. The Continental countries are all exposed to the same dangers which we have stressed in the foregoing chapters.

Which are the interests common to all the Continental countries?:—

(1) Preservation of the domestic market.

(2) Preservation of those European countries which are still agrarian, and have not yet started a cotton industry large enough to supply all their national requirements.

(3) Participation in the export trade of the rest of the world.

The various nations can insure the permanence of their domestic markets by raising protective duties high enough, and they will be forced to do this until they create a mutual agreement between the various countries producing cotton goods. That is one of the reasons why I cannot yet see that the tariff walls, which impede so much free commerce, will disappear just yet.

At the outset it will not be possible to come to an agreement as regards the exports to the rest of Europe and the world at large. The competitive fight will continue there. As we have seen, the menace for Europe is that countries with double shift will send goods to us, as in fact Japan has sent, in England's pre-tariff days, quilts and towels to London and Manchester, and is selling even to-day in several European countries some of her productions.

Even if the tariff walls of Europe fall or are reduced, it will be necessary to have protective duties against the goods from the other groups. That applies also in case a Pan-Europe is created.

As long as Europe is face to face in competition with the other groups for the export of goods, there is no other remedy but to put her own house in order, first each country nationally and then the Continent as a whole. An industry that has been weakened through internal competition in its domestic market cannot possibly hope to be successful in the still more acute battle for the export trade. Once the industry has been placed on a sound footing by means of territorial agreements, it will be possible for this combined industry to adopt the same means as its competitors. It will not be possible to reduce the working hours where goods are concerned that are purely destined for export. That is one of the reasons why the social fight in England for the extension of working hours becomes comprehensible; otherwise it would not be logical to make propaganda for longer hours in England. The Continent of Europe will have to resort to double shifts whenever the goods are to be exported; otherwise it would not have the same advantages as her competitors in Asia. It will become necessary to centralize the whole of the export trade, to define the mills that are the most suited to this trade, to simplify the whole export business in one centre and work it on account of the whole industry.

The export trade is becoming more and more difficult; to export even to-day means fighting big competition, and it will be more so in the future, as we have seen. Nevertheless, we are forced to continue the fight. We cannot possibly give in—we must obtain peace by means of fighting. *Of course, it would be by far better to come to some peaceful understanding before continuing the struggle on a more intensive basis. Does the industry as a whole possess the necessary international insight? Do we trust each other enough to be able to work for the world's peace in the cotton industry?*

I consider that the first step must be that each individual country in Europe organizes on the lines described towards this common action, always bearing in mind that co-operation and co-ordination within the European countries is to be the next step. The management of the export trade by such combined organization would assist considerably in hastening the world's peace in the cotton industry. An agreement amongst the groups of countries with similar interests, such as England and U.S.A., will follow soon, and with the remaining countries the peace will be made when they recognize our powerful position.

In order to achieve or to prepare an international understanding of these problems it will be necessary to form a Union of Cotton-spinning Mills of the European Continent, or of the whole of Europe (including England). If England desires to participate from the start the Continent will be only too happy.

Simultaneously with the creation of this Union there must be undertaken in each country the organization of the quota system, assuring to each mill equal hours of work. That is the rock on which the whole of the organization must be built. There can be no success without it.

APPENDIX.

After I had prepared the present dissertation I received from the International Federation of Master Cotton Spinners' and Manufacturers' Associations their "Statistics of Cotton Spindles in the Smaller Sundry Countries," and the book of Mr. Arno S. Pearse on "The Cotton Industry of Japan and China" was kindly put at my disposal. I am utilizing these to complete my dissertation, all the more willingly because not only do they fill certain gaps in my own work, but, much more, they also point clearly to the correctness of my own conclusions.

I have abstracted from Mr. Pearse's book, which is thoroughly interesting and very capable, just a few of the details which come within the purview of this discussion. Those who have followed my previous remarks will require little commentary to these details, the figures being themselves self-explanatory. We note only that:

(*a*) The Japanese and Chinese cotton industries are gaining rapidly in importance.

(*b*) Through their exhaustive utilization of the labour capacity of their employees, by way of double-shift working, standardized methods, etc., they can produce specially cheaply, and on this very ground can put American and European competition in the shade.

(*c*) The very low wages paid in Japan, and especially in China, are proving of great advantage to both these countries.

(*d*) Technically, both countries are well ahead.

(*e*) Through various circumstances (principally through the Great War) they were enabled to collect together great reserves, in spite of the fact that they paid dividends of 14 to 15 per cent.

(*f*) Through their splendid organization and statistical information they are able to suit their production exactly to demand.

(*g*) They are most to be feared as competitors in the export trade.

The detailed statistics respecting the smaller countries, i.e., those with small spinning industries which are included in the rest of the tables under the heading "Sundries," show us clearly how countries which are predominantly agricultural in character are continuously making themselves independent of the industrial countries.

COTTON SPINDLES IN THE SMALLER SUNDRY COUNTRIES

	1913	1920	1930
Europe			
Bulgaria	16 000	16 000	20 400
Greece	63 898	3 898	212 000
Cyprus	1 800	1 800	1 800
Yugo Slavia	in Austria	5 000	145 400
Roumania	5 000	163 000	34 000
Esthonia	in Russia	—	557 000
Latvia	in Russia	60 000	118 000
Europe—Sundries	86 698	249 698	1 088 600
Asia			
Turkey	40 000	40 000	99 164
Indo China	40 000	60 000	70 000
Korea	—	—	31 000
Persia	—	15 000	40 000
Asia—Sundries	80 000	115 000	240 164
America			
Argentine	7 000	16 000	27 592
Peru	45 000	50 000	55 000
Colombia	20 000	25 000	44 366
Ecuador	5 000	4 000	35 000
Venezuela	11 000	19 000	48 000
Guatemala	4 000	5 000	5 000
Bolivia	—	—	6 000
America—Sundries	92 000	119 000	220 958
Africa			
Egypt	20 000	20 000	63 000
Australia	—	—	24 000
Total—Sundries	278 698	503 698	1 636 722

INTERESTING DETAILS RELATING TO CHINA AND JAPAN, from the book, "The Cotton Industry of Japan and China," by Arno S. Pearse.

1.—JAPAN

1868 Japan opened her barriers to Western civilization.

1867–8 The first spinning mill, of 6,000 spindles (Platt Bros.) was erected by Prince Tadayoshi. The Government then encouraged the building of spinning mills by means of grants.

Further Development.

Year	No of Companies	No of Spinning Concerns	Spindles	Production 400 lb Bales	Yarn Export Bales	Doubling Spindles	Looms
1881	—	7	16,204	—	—	—	—
1885	—	20	65,420	—	—	—	—
1890	30	30	277,895	104,839	—	—	—
1895	47	47	580,945	366,689	—	—	—
1900	79	80	1,267,872	654,432	157,177	—	—
1905	49	78	1,426,594	905,636	240,645	—	—
1910	36	136	2,099,764	1,134,780	312,870	—	—
1913	44	152	2,414,499	1,517,982	468,736	—	24,200
1914	42	157	2,657,174	1,666,184	569,990	—	—
1915	41	161	2,807,514	1,720,264	575,891	—	—
1916	40	161	2,875,904	1,925,579	547,147	—	—
1917	43	170	3,060,478	1,923,841	470,852	—	36,200
1918	43	177	3,227,678	1,803,866	421,510	—	—
1919	54	190	3,488,262	1,920,782	230,333	410,690	44,401
1920	56	198	3,813,580	1,816,976	304,925	466,460	50,583
1921	61	217	4,161,126	1,811,350	262,260	533,384	54,994
1922	64	235	4,517,612	2,228,246	394,062	602,032	60,765
1923	70	241	4,436,798	2,171,153	248,324	510,031	64,460
1924	69	247	5,125,696	2,072,817	270,359	685,995	68,579
1925	64	248	5,447,184	2,436,783	310,801	759,632	73,382
1926	64	247	5,679,852	2,607,746	205,550	789,688	77,043
1927	64	257	6,116,266	2,530,642	117,654	787,490	78,352
1928	72	259	6,467,174	2,451,862	71,655	809,452	81,209

In July, 1932, the number of spindles had risen to 7,798,000.

1889 The Japan Cotton Spinners' Association was founded at Osaka.

1894–5 The Sino-Japanese War helped the cotton industry of the latter, in that Japan was able thereafter to flood Korea with cotton goods. She was able to compete with the Indian cotton industry. The war damages (reparations) paid by China led to a strong forward movement.

1898–9 Financial difficulties led combined mills to reduce production by stopping four days in the month.

1900 The Boxer Rising in China forced Japan to cease night work temporarily. At this time the fusion of concerns commenced. Large firms bought up the smaller ones.

1904 The Russo-Japanese War broke out Japan again made gains through the war Dividends rose from 20 per cent to 50 per cent

1908 A setback forced the Association to a reduction in production of 27½ per cent Propaganda to increase exports to China and other countries commenced

1908–12 Reduced working was necessary

1914 The reduction amounted to four days in the month

1915 Through the curtailment of production in the European spinning mills, the lack of raw material and shipping facilities, the European cotton industry could not ship goods via the Suez Canal The consequence was a demand from the countries of the Orient which only Japan could satisfy We see that, a third time, a war proved of advantage to Japan Thanks to the long duration of the Great War, the Japanese industry was able to gain a secure footing in Eastern countries By means of her immense profits at this time she was able not only to pay large dividends but also to put large amounts to reserve In post-war times she was able to use these to make herself even more competitive

1913 The Japan Cotton Association worked with 2,414,499 spindles and 24,200 looms (22 hours daily) Paid-up capital 86,500,000 yen, reserves 34,000,000 yen Average dividend, 14 per cent

1917 3,060,478 spindles and 36,200 looms Average dividend, 37 per cent

1919 3,481,262 spindles and 44,400 looms Average dividend, 50 per cent Paid-up capital, 166,000,000 yen Reserves, 139,000,000 yen

The spindles added in these years were mostly delivered by the U S A The looms were mostly made by Japan (the Toyoda Automatic)

1920 Dividends again fell to 26½ per cent on the average.

1921 Dividends fell to 14 per cent on the average, remaining at this level more or less till 1928

1923 The great earthquake ruined 400,000 spindles and temporarily put a further 200,000 spindles out of action

1928 The financial position of the Japanese spinners was very sound In this year it was as follows —

Reserves	241,821,127 yen
Paid-up Capital	376,817,127 yen
Loans	99,254,492 yen
Fixed Assets	507,732,724 yen

Average dividend, 13 85 per cent

TOTAL NUMBER OF COTTON LOOMS IN JAPAN.

(Department of Commerce and Labour).

			1923	1924	1925	1926.
fewer than 10 looms	Automatic looms	broad	2,116	2,192	2,460	3,476
		narrow	8,134	6,882	6,030	7,097
	Ordinary looms		141,584	130,053	114,573	94,490
	Total ..	..	151,834	139,127	123,063	105,063
10–50 looms	Automatic looms	broad	17,635	18,463	23,355	26,296
		narrow	65,269	60,266	55,448	57,236
	Ordinary looms		12,135	9,341	8,716	6,437
	Total ..	..	95,039	88,570	87,449	89,969
more than 50 looms	Automatic looms	broad	93,035	96,254	103,442	116,053
		narrow	60,109	56,742	48,334	51,174
	Ordinary looms		5,681	6,699	3,071	3,711
	Total .	.	158,825	159,695	154,847	170,938
Total	Automatic looms	broad	112,786	116,909	129,187	145,825
		narrow	133,512	123,890	109,812	115,507
	Ordinary looms		159,400	146,593	126,360	104,638
	Total ..		405,698	387,392	365,359	365,970

With the increase in the number of mechanical looms, the number of hand looms is decreasing.

Organization of Japanese Cotton Industry.

The "Japanese Cotton Spinners' Association" comprises 97½ per cent. of all the cotton spindles and about 50 per cent. of the mechanically driven looms.

The main object of the Association is the compilation of extraordinarily detailed statistics, such as no European country can show.

It is obvious from the published statistics that the Japanese spinners are much better educated to the need for statistics than their European competitors, and they have the requisite knowledge to make full use of them in the conduct of their industry.

Each of the factories, as far as possible, specializes in a few counts or types of fabric. The system of specializing in certain lines is carried out to an extent which is without parallel in Europe.

From the year 1902 to 1929 the Association reduced production 18 times (the reduction amounting to up to 27½ per cent.) in order to adjust production to demand. The Association has favourable transport rates for the import of cotton and for the export of the manufactured goods. Export is organized and considerable propaganda is put out in its support.

The Association is the soul of the whole cotton industry in Japan.

WORKING CONDITIONS.

Up to 1913 the hours of labour were 22 per day (2 shifts of 11 hours).
Up to 1929 the hours of labour were 20 per day (2 shifts of 10 hours).
From 1929 the hours of labour were 17 per day (2 shifts of 8½ hours).

Since work goes on for 28 days in the month, only two Sundays in the month being free, the present rate corresponds to one of 106 hours per week.

Japan has no trade unions such as are in existence in Europe. Communistic and Bolshevistic tendencies are nipped in the bud by the Government. Such organizations are rendered unnecessary by the fact that 80 per cent. of the workers are single girls who are recruited on a 28 months' contract and are provided with hostels, schools, baths, sports, hospital, etc.

The monthly income of a girl is about 30 yen (15 American dollars); her expenses in the common lodging are about 13.50 yen (6.75 American dollars), so that she is able to save about 16 yen (8 American dollars) per month.

The monthly income of a worker is about 45 yen (22½ American dollars); his expenses in the common home amount to about 27 yen (13.5 American dollars), so that he is able to save about 18 yen (9 American dollars).

These conditions are favourable for the labourer, who cannot make a good living on the land.

Youthful workers, under 14 years of age, cannot be taken on in the factory, with the exception of those who have passed all their school classes; the latter can be taken from the age of 12 years.

Social laws, as they are known in Europe, do not exist in Japan, with the exception of the compulsory social insurance introduced in the year 1926-7. The expenses of this are met by a 10 per cent. contribution from the State, 45 per cent. from the employer and 45 per cent. from the worker.

Japanese workers are very skilled and are able to maintain a superior rate of production to that attained in Europe. In the factories themselves the utmost cleanliness and order is maintained.

PRODUCTION PER SPINDLE IN 48 HOURS

Counts	Japanese Spindles	English Spindles
100	28·8 lbs.	—
80	31·68 „	24·96 lbs.
60	36·86 „	30·24 „
40	42·24 „	36·10 „
30	39·1—40·3 „	37·2 „
20	49·54 „	43·48 „

Japanese workers can very well compare with the best European workers.

The 10 hours' wage for a ring spinning operative 800 spindles No. 32 amount in Japan to 3s. (73 American cents), in England to 7s. 7d. (184 American cents). A comparison of the weaving cost per yard of 44-in. cloth No. 42/46 with 68/72 picks per inch, amounts in Japan, at the rate of 40 yards per loom in 10 hours, to 0.225d., i.e., 0.045 cents (in wages for the average weaving shed).

In Lancashire the cost is 0.75d. (0.151 cents) for 37½ yards in 10 hours.

Even after addition of 7d. (14 cents) daily costs of the necessary welfare measures, wages in Japan are less than half those in England.

With No. 20's there are about 8·4 workers per 1000 spindles
With No. 40's „ „ 7·0 „ „ 1000 „

CALCULATIONS—COST OF A BALE OF 400 LBS

	No. 40's Yen per 400 lbs.	No. 20's Yen per 400 lbs	Cents/Kilo
Wages, inclusive of general expenses and welfare contribution	34	17	4·7
Power	14	7	1·95
Various, including maintenance of machinery	14	7	1·95
Taxes	4	2	0·55
Insurance	0·5	0·25	0·10
Cash outlay	66·5	33·25	9·25
Interest	5·5	2·75	0·80
Amortisation (3% of machinery)	6·0	3·0	0·80
	78·0	39·0	10·85

The costs of a spindle amount to about 90 yen, arrived at in the following manner:—

	Yen		American dollars
Ground	5·5 Yen	=	2·70 American dollars
Building	16·0 „	=	7·90 „ „
Office and Stores	3·0 „	=	1·50 „ „
Welfare	15·0 „	=	7·40 „ „
Machinery	50·5 „	=	24·70 „ „
	90·0 „	=	44 0 „ „

TRADING BALANCE.

The trade balance of the Japanese cotton industry is passive. With the decrease in the exports of cotton yarn began the increase in the exports of cloth.

1923 = 259,479,776 Yen
1924 = 354,937,283 Yen
1925 = 472,357,273 Yen.
1926 = 448,720,101 Yen
1927 = 418,578,846 Yen.

The exports for the year 1927 were directed to the following countries in the quantities mentioned:

China	=	32 per cent.	(has declined as against 1918).
Kwantung	=	3½ „	(has declined as against 1918)
Hongkong	=	7½ „	(has increased tenfold since 1918).
British India	=	22 „	(has declined since 1918).
Straits Settlements	=	4 „	(has increased threefold since 1918).
Dutch Indies	=	13 „	(has increased threefold since 1918).
Philippines	=	3 „	(has increased tenfold since 1918).
Siam	=	1 „	(has increased tenfold since 1918).
Africa	=	8·5 „	(has only been entered recently).

CHINA

1890 The first spinning mill was erected by Li Hung Chang, and was burnt down three years later

1896 Four mills were erected by foreigners in Shanghai, two by Englishmen, one by an American and one by a German (Total spindles, 155,000)

Date	Chinese Spinning Mills	Foreign Spinning Mills	Spindles in Chinese possession	Spindles under foreign control	Total Spindles
1894	1	—	65 000	—	65 000
1896	8	5	225 267	204 342	429 609
1902	12	5	302 240	207 694	509 934
1906	17	5	426 767	214 157	640 924
1910	22	7	524 009	300 094	834 103
1913	24	10	593 191	370 841	964 032
1918	31	11	765 091	483 500	1 248 591
1928	74	46	2 087 506	1 550 592	3 638 098
1932	—	—	—	—	4 285 000

The spinning mills are distributed as follows since 1928 —

In Chinese possession	74 with 2 087 506 spindles and 13 907 looms
In Japanese possession	43 with 1 397 272 spindles and 13 982 looms
In British possession	3 with 153 320 spindles and 29 788 looms
Total	120 spinning mills with 3 638 098 spindles and 29 788 looms

The foreign concerns place more value on their looms since the goods they manufacture are specially destined for export In the management of the Chinese and foreign (especially the Japanese) factories, there is a very great difference The factories in possession of the Japanese are organized in the same way as those in Japan, and are kept very clean, are provided with all the necessary welfare developments, and, in spite of shorter hours, have a better production than those that belong to the Chinese The Japanese organize both the manufacturing side and the trading side A portion works for export business, whilst the Chinese only work to meet the home demand

In consequence of the low wages there are only a few automatic (Toyoda) looms, as these do not pay in China

WORKING CONDITIONS

The working hours are as follows —

Chinese concerns 2 × 12 hours daily
Japanese concerns 2 × 11 hours daily

Many factories close down each Sunday afternoon, and many allow two days' holiday in the month The working period goes on with three pauses of 15 minutes each

Child labour is allowed The Chinese workers are not so clean and disciplined as the Japanese, but are willing and with good management are quite useful Wages are about half those paid in Japan, since the standard of living is lower The output of the workers is also lower In the best spinning mills it is reckoned that about 20 per cent. more workers are needed than are required in Japan to look after the same number of machines. In many spinning mills 50 per cent. more are needed. Conditions are worse in the weaving sheds. Whilst one can reckon on 5.5 looms per weaver in Japan, on account of the many automatic machines, in China it is hardly possible to reckon on 2.

Wages differ widely. In Shanghai they are as follows (on the average):—

For ring spinning machine, 0·56 Mex. dollars (0·28 Am. dollars) per 12 hours.
For two-loom weavers, 0 60 Mex dollars (0·30 Am dollars) per 12 hours.

The wages in the interior of China are very different:—

Spinner, 0·35 Mexican dollars (0·18 American dollars) per 12 hours.
Two-loom weaver, 0·41 Mexican dollars (0·20 American dollars) per 12 hours.

Production and staffing of several factories:—

No. 1	DNo	42	28,7 hanks	in 48 Std.	9,3	Arbeiter per	1,000 Sp.	(ohne Weiferei)
No. 2	„	16	1,3 lbs.	in 22 Std	19,5	„	1,000 Sp	dto.
No 5	„	16	1,05 lbs.	in 24 Std	15,0	„	1,000 Sp.	dto.
No 5	„	31	41,1 hanks	in 48 Std	14,6	„	1,000 Sp	dto.
No. 7	„	10–40			12,0	„	1,000 Sp.	dto.
No. 8	„	10–20	37,5 hank	in 48 Std.	16,8	„	1,000 Sp.	dto.
No. 10	„	10–20	1,3 lbs.	in 24 Std	14,5	„	1,000 Sp.	dto.
No 11	„	24	1,1 lb. No	20–24 Std.	8,2	„	1,000 Sp	dto

The costs of a spindle were, during the European War, 5 taels (at the 1919 rate, 1 tael equalled 1.39 American dollars).

In 1928 they amounted to about 40 taels (26 American dollars).

There follow two calculations made at the rate of 1 tael equals 62 cents:—

Labour	10	Taels	=	3·40	Cents	per Kilo.
Taxes	3·85	„	=	1 30	„	„
Power	4·00	„	=	1 35	„	„
Material	3·50	„	=	1·20	„	„
General expenses	0·20	„	=	0 07	„	„
Cash outlay				7·32	„	„
Interest	2 00	„	=	0·70	„	„
Total				8·02	„	„

Labour	9	Taels	=	3·05	Cents	per Kilo.
Taxes	3·80	„	=	1·29	„	„
Power	3·20	„	=	1·09	„	„
Material	3·50	„	=	1·20	„	„
General expenses	5·00	„	=	1·70	„	„
Cash outlay				8·33	„	„
Interest	8·00	„	=	2·72	„	„
Total				11·02	„	„

(N.B.—In the first calculation the general expenses and interest seem to have been put at too low a figure.) Amortization expenses have not been included, since in China, as in Japan, it is not the custom to include these, since they are only paid at the conclusion of the year out of profits.

The statistics of trade show an active balance, because China in bad years (1921 22) grew about 1,450,000 bales herself, and in good years (1918 19) about 2 924 141 bales

CONCLUSION

Mr Arno S Pearse wrote the book from which I have taken the foregoing figures in February April 1929 At that time the following exchange rates were in force –

For Japan 1 Yen equalled 2 Shillings 58d
0 4984 U S A dollars
2 0924 RM
2 583 Francs

For China 1 Mexican dollar equalled about 0 50 U S A dollars
1 Haikwan Tael equalled 583 3 grains of silver 1 000 fine
or about 1 5 Mexican dollars or 0 7 U S A dollars

The tael varies a great deal with the price of silver, and amounted to the following in the years shown —

1919	=	1 39 American dollars		1919	=	6s	4d
1920	=	1 24		1920	=	6s	9d
1921	=	0 76		1921	=	3s	11d
1922	=	0 83		1922	=	3s	9d
1923	=	0 80		1923	=	3s	5d
1924	=	0 81		1924	=	3s	8d

Now I should like to point out that whilst, in the meantime the £ sterling has fallen in value, the yen and the tael have fallen very much more

In March, 1933,

For Japan 1 Yen equalled 1s 3 4d
0 22 U S A dollars
0 901 RM

For China 1 Mexican dollar (Hongkong) equalled 1s 4 5d
0 238 American dollars
1 Tael equalled 1s 9d
0 304 American dollars

Even when one reckons that the purchasing power of the Japanese and Chinese gold may have decreased somewhat in consequence of this inflation, the spinning calculations made by Mr Arno S Pearse in the year 1929 in yen and taels will not have increased to the same degree

The consequence is that the Japanese and Chinese cotton industry, notwithstanding the exceedingly low costs shown in the above calculations, can work on an even lower basis at the present time

In face of the three factors of double shift working cheap labour and inflation, the European industry is powerless

Reichenberg, March 18 1933

Principles which should form the Basis for the Establishment of a Quota Allotment in the Cotton Industry of Every Country.

Article contributed by Herr Director OTTO BANKWITZ in response to many requests for an outline of a scheme as suggested in his Prague Congress Paper.

COLLECTION OF EXACT STATISTICS.

IN order to obtain an exact representation of the state of trade and the financial situation of the cotton industry in any country, it is necessary to determine, first of all:—

(1) What quantity of the yarns spun is intended for home consumption.

(2) What quantity is intended for export.

A further important sub-division has to be added to Group 1, as follows:—

(*a*) What quantity of the yarns are for sale (i.e., yarns which are sold in the raw, bleached or coloured condition, single or doubled by the spinning firm direct or through dealers to yarn consumers for home consumption).

(*b*) What quantity of yarns are so-called "own consumption yarns" (i.e., yarns which are consumed by firms owned by the company, such as weaving sheds, embroidering firms, etc., belonging to the spinning firms).

The cotton yarn stocks should be divided in a similar manner into "yarn stocks for sale" and "yarn stocks for own consumption."

The productive capacity during a normal working week (for example, by 48 hours weekly) should also be ascertained at the same time; furthermore, the number of ring and mule spindles should be stated.

This preliminary tabulation, which I call the "preliminary stock-taking," is necessary because it gives very important information on which the future programme of the spinners' cartel must be built up. This programme must be made known to the members prior to its formation, as any misunderstanding as regards the quota restrictions should be avoided.

The preliminary statement has to be based, as far as possible, upon a long period, in order to obtain a correct survey, but if it should not be possible to compile an absolutely exact basis, one would have to be satisfied with approximate figures, providing that they show the chief features of the country's industry, so that a start could be made with the quotas as soon as possible.

The correct figures will very soon be known from the weekly statistics which it will be necessary to collect.

These are as follows:—

(1) (*a*) Stock of yarn for sale
  (*b*) Stock of yarn for own consumption.
    (The latter are the yarns which are allotted for one's own weaving factory, embroidery, etc., and are still unconsumed in stock.)

(2) Effective production:—
  (*a*) For sale.
  (*b*) For own consumption.

(3) Effective consumption:—
  (*a*) For sale.
  (*b*) For own consumption.

By "effective consumption" is understood such yarns which are delivered (invoiced) to the purchaser, or to one's own affiliated firms, but not sales which were made in the period under review, but which have not yet been delivered.

(4) In those countries in which long-term delivery contracts are customary:—
  (*a*) Delivery of yarns against contracts in the period under review.
  (*b*) New contracts in the period under review.
  (*c*) Number of contracts not yet delivered at the end of the period under review.

(5) "*Export*":—
  (*a*) Delivery of yarns against export contracts.
  (*b*) Quantity of undelivered orders.

It should be possible to collect and publish the total result of these statistics weekly to members. By means of these figures they will receive a survey of the position during the period each week, whereas, if only monthly statements were issued, members would receive the survey far too late and the statistics would be of little real value.

The plan which the cartel would have to follow is easily seen from the preliminary statistics. If, for instance, the preliminary investigation shows that the home consumption of the country in one year amounts to 40 million kilos. of yarn, but that the productive capacity over a 48-hour working week is 50 million kilos. of yarn, then it must be made clear to the members of the Association that they must only work for the home market 80 per cent. of full time—the balance must be stopped entirely or only worked for export. In introducing the quota, this phase is the most difficult operation. In those countries where a single shift for the spindles in existence would be sufficient for the home consumption it is only necessary to cut down the degree of operation by the difference between production and demand and those firms who are working on double shifts must be made to work single shifts On the other hand in countries where the spinning industry is capable of producing far more yarn than required by the home market greater reductions in productive capacity are necessary These of course are not looked upon with favour by all the members even although the reduction should be necessary

(1) The main principle of a quota agreement is that there is no reason whatsoever to spin even 1 000 kilos of yarn more than the home consumption is able to take up because increasing stocks of yarn weigh heavily not only upon the commercial balance of the country in an unnecessary manner but also lead to an automatic and dangerous price reduction Such price reductions are not only dangerous for the producer but also for the purchaser It should be stated here that an endeavour to obtain an artificial rise in price through an excessive reduction in stocks is not advisable Such a movement not only brings about a storm of indignation from the consumer but also works against the cartel in that members will desire to obtain a larger quota Too high a price is therefore to be avoided under all circumstances Furthermore it leads to other countries endeavouring to import foreign yarns as soon as the foreign price plus the duty, has been exceeded *The task therefore, of the quota cartel is not only to keep yarn stocks from becoming too big but also to prevent them from becoming too small, and it must furthermore regulate production in accordance with the home demand*

I would like to mention here that I am not in favour of price control not only because price cartels are looked upon with much disfavour but because it is very difficult to control them In every compact made there are sure to be some parties who will endeavour to evade the rules of the cartel everything should be done to awaken general confidence in the cartel Price agreements merely open the door to evasions It would be extremely difficult to formulate an exact scale or category for each quality and it would also be very difficult to check every single sale in order to find out whether or not secret commissions had been granted to the buyer Price cartels are the means of shaking the confidence of the buyers but *if the production of a country is in line with demand then the price regulates itself* in the very soundest manner As an additional measure one might publish the actual sales together with price and existing conditions of payment This has been proved to be of great usefulness

(2) *Exports* The export valve remains open at least as long as the export is not centred for the whole country in one single controlling office

It will be necessary to organize a system of export certificates For this one would require the help of the Government for the supply of export certificates which would be obtainable from the Customs Office abroad or at home, to be submitted to the offices of the cartel These certificates should contain the weight of the exported goods counts used in cloth perhaps also the construction of the cloth and possibly a sample A sample is useful in order that the Association may check the details in the case of mixed fabrics

The consumer and the exporting firm are to furnish to the spinner proof of the yarn having been exported Only after this must we regard a delivery as having gone abroad

(3) *Correct quota agreement for the home market*

This must allow all spinners to produce upon the same basis, the more equitable these agreements the more certain will the agreement be kept Injustice, even towards the smallest or the weakest group would wreck the agreement, so that the closest study of different conditions in each country is absolutely necessary in order to avoid any injustice As regards the co operation between various countries which is a natural outcome of the movement, it would be necessary to introduce similar quota agreements in all European countries, but it would, of course, not be possible to have the quota agreement in each country exactly the same owing to the different conditions and to the different mentality in the various countries I restrict myself, therefore, to the description and explanation of the

POLISH QUOTA AGREEMENT

(1) The Polish cartel comprises all the so-called "American spindles" which spin yarns from all kinds of cotton up to 46's Combed and Egyptian cotton spindles above 46's, as well as waste-spinning mills are not members of the Cartel For Egyptian spinning firms a separate agreement is in course of negotiation

The basis of the quota is the "spindle hour" It should be stated here that to base the quota upon the effective working over any previous period for one or two years is not recommended Should such a short basis be taken it may perpetuate false values If, for example, two similar neighbouring spinning firms, one of which is running at a higher capacity than the other because it has a larger capital, or if the one, on account of reorganization, has been stopped some time, then it would be unjust to take their data as a basis for a future quota agreement, because the financial circumstances may eventually become reversed Why should one spinning firm, because it is working in two shifts, have an advantage even in the future, against another which has previously reduced its output?

Even quotas expressed in weight are unreliable, because they depend upon previous average counts produced, and every spinner must have the opportunity to switch over to other counts if the conditions warrant such a procedure Even better and more equitable would be quotas in hanks but their calculation and fixation is a very debatable point, especially when individual spinners take their highest production as their basis The supervision of such a quota would also be difficult and complicated On that account we have adopted the spindle-hours basis in Poland which can be quite easily fixed and controlled If a spinning mill "A" possesses 50,000 old spindles, which only produce very little, and another spinning mill "B" owns 50,000 modern spindles, then each of these spinning firms, working on an 80 per cent quota in a 48-hour week, is only able to have allotted to them a possible

1,920,000 spindle-hours. There is no disagreement as to whether the production of one or the other spinning firm is calculated too high. In Poland we have almost exclusively ring spindles, and for that reason both mule and ring are taken as equal, but in countries where a greater proportion of mule spindles exist it is to be recommended that both types are placed upon a similar basis in order to avoid any injustice, i.e., one mule spindle should equal 0.75 ring spindle.

(2) The quota for each four-week period must be fixed by the cartel executive, not later than three days before the commencement of the period (in most cases it is 14 days). For instance, on the last occasion, it was given out that in the next period a quota of three weeks at five days of eight hours each had been agreed upon, and in the fourth week, on account of a holiday, only four days at eight hours were to be worked; therefore the quota for the next period of four weeks was fixed at 152 hours. The spinner "A" knew, therefore, that during the next period he could only work with his 50,000 spindles equal to 7,600,000 spindle-hours. How he divides them up in the four weeks, and which machines he runs, is a matter for himself to decide. At the end of the period he must show from his books a statement which is subject to control by the cartel as to how many hours he has run with the various machines. The only stipulation is that he must not work more than the 7,600,000 spindle-hours. An excess of 1 to 1½ per cent., which is practically unavoidable, will be carried over to the next period, and debited against him. But the unused spindle-hours must not be carried forward, except in cases of stoppage through *force majeur*, when this fact is at once made known to the cartel.

(3) There were two groups of opponents to the quota system at its formation. These were:—

Category "*A*." The so-called "spinner-weavers" who undertook to use their own yarn solely for their own use, and neither to sell it directly nor indirectly, and

Category "*B*." Spinning firms, which are working on a commission, and have hired out part of their spindles or are bound by contracts or agreements with their creditors. (Such exceptions must regulate their quota in accordance with a State Arbitrator.)

To category "B" belong, for example, spinning mills who have hired out their spindles on a basis of double shifts. A third group of opponents were the so-called small "spinning firms" below 15,000 spindles, which were under the illusion that larger spinning firms could spin more favourably than the smaller firms, therefore they wished to work longer. This opposition led to the so-called

SPINDLE CLEARING HOUSE.

The spindles which are subjected to the clearing are distributed as below:—

(*a*) "Compulsory clearing."
(*b*) "Voluntary or temporary clearing."
(*c*) "Clearing of imaginary spindles."

Compulsory Clearing

In this class are Spinning firms which possess —

Over 100,000 spindles they must place 9 per cent
60-100,000 ,, ,, 8 ,,
33-60,000 ,, ,, 5 ,,
16-33,000 ,, ,, 3 ,,
Under 16,000 ,, ,, 0 ,,

of their spindles—against a compensation of $1 per spindle per year, at the disposal of the compulsory Clearing House. Every 100,000 spindles which are at the disposal of the compulsory clearing are divided, half between the Category "A" and half between the Category "B," as follows —

To the Category "A" at 75 cents per spindle per year, plus 10 per cent expenses of the cartel,

To the Category "B" at 125 cents per spindle per year, plus 10 per cent expenses of the cartel

pro rata of their application. The division into the compulsory clearing is for the duration of one year. Should any category not make full use of their compulsory clearing spindles at their disposal, then the balance can be placed at the disposal of the other category.

Voluntary or temporary clearing is based upon spindle-hours, which are offered voluntarily by the cartel members from their own quota, at least six days before the beginning of the next period concerned. At the same time we also have enquiries from other spinning firms to hire temporary spindle-hours. These firms must announce their desire to buy extra spindle-hours at least six days before the beginning of the new period. Both seller and purchaser limit their prices. A too-high or too-low limit which is not feasible is simply thrown out.

In the course of time it has become general to pay a price of 60-70 cents per 1,000 spindle-hours (which equals about $1 30 to $1 55 per spindle per year). The cartel collects the cash from the purchasers, plus 10 per cent for the cartel's expenses.

The Clearing of imaginary spindles is based upon spindles which really do not exist. These spindles are periodically distributed amongst the applicants, on previous application (six days before the period). The price amounts to $1 80 per spindle per year (that is, about 90 cents per 1,000 spindle-hours) plus the commission of the cartel.

Category "A" has the right to run their spinning mills by means of all three varieties of clearing up to 200 per cent of full time.

Category "B" has the right to use the compulsory clearing and the temporary voluntary clearing (but not the imaginary spindles).

All other members have the right to claim the voluntary and temporary clearing.

For example. A 30,000-spindle mill of Category "A" desires in the next period, for which the quota of 152 hours was fixed, to work their spinning mill 200 per cent. of capacity. They will therefore work

30,000 x 152 =	4,560,000	spindle-hours.
Deducting their 3% assessment	136,800	,, (transferred to the compulsory clearing).
	4,423,200	spindle-hours.
Purchased from the compulsory clearing ...	647,520	,, (4,260 spindles at 152 hours).
Purchased from the voluntary clearing	1,430,700	,, (*pro rata* at 70 cents per 1,000 spindle-hours).
Alloted, therefore, in total	6,501,420	spindle-hours.
The mill should receive at 90 cents the balance still due = ...	2,618,580	spindle-hours of imaginary spindles, and
may now work ...	9,120,000	spindle-hours

It receives for the delivery of 900 spindles to the compulsory clearing $900 per annum, whereas it pays for the distributed 4,260 spindles from the compulsion clearing, approximately:—

	$
$3,200 per year, therefore, for this period, plus 10% =	270
1,430,700 spindle-hours, voluntary clearing at 70 cents, plus 10% ... ... =	1,101
2,618,580 spindle-hours, clearing from imaginary spindles at 90 cents ... ... =	2,360
In total, therefore for this period	$3,731

If one calculates 1.6 kg. production of 20's in 100 spindle-hours, this spinning firm pays for about 4,700,000 spindle-hours = 75,000 kg. = $3,731 = 5 *cents per kilo. over-production.* But if it does without the imaginary spindles, then it pays for approximately 2,080,000 spindle-hours = 33,000 kg. = $1 371 = 4 *cents per kilo. over-production.* If it does not take part in the voluntary clearing, then it pays for 650,000 spindle-hours compulsion clearing 10,400 kg. = $270 = 2.6 *cents per kilo. over-production.* The imaginary spindles are mostly only made use of at times of good trade.

The 10 per cent addition is a source of income to cover the expenses of the cartel. The income from the imaginary spindles is added to a separate account which is distributed at the end of the year amongst all the spinning firms of the cartel, *pro rata* according to the number of spindles. We instituted the imaginary spindles because it was theoretically possible to the 'spinning-weavers of Category A' to set up the new spindles of which they were short. This increase was avoided by means of the imaginary spindles. The amount of $1.80 per annum per spindle is however a smaller charge than the interest and depreciation on a new spindle.

The chief purpose of the spindle clearing house is that those spinning firms which have to spin above the quota are brought at least upon the same cost calculation basis as these spinning firms which are working at a reduced capacity.

Government Support

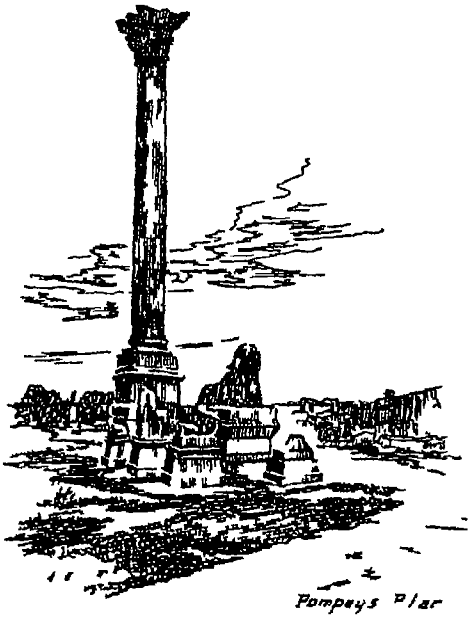
During 1930, before the present quota agreement came into force, a more simple agreement existed, to which 93 per cent. of the spindles belonged. Whereas these 93 per cent. were working at reduced capacity and brought the sale prices in harmony with the production costs, the 7 per cent. of outsiders were working on double shifts, undercutting prices, and finally wrecked the agreement. The sale prices dropped in a catastrophic manner. The Government was asked by 85 per cent. of the spinning firms for help, and under pressure from the Government the help of a State Arbitrator was obtained, and after long discussions in the middle of 1931 the above mentioned quota Agreement was agreed to, to which 100 per cent. of the spindles belonged. It was arranged that the cartel was to be in force up to 1934 and should be automatically prolonged from year to year. To make it binding, as we have already stated, the State created a distinct customs duty upon cotton, which spinning firms belonging to the cartel do not have to pay. Besides the general customs duty upon cotton of 1 zloty (11 gold cents) per 100 kilos charged for cotton arriving at Gdynia (as against 6 zloty at other customs offices), there exists *a customs duty of* 45 *zloty* ($5.10 *gold*) *per* 100 *kilo*, which the cartel firms are not required to pay; this exemption has to be renewed from quarter to quarter.

This quota agreement has now functioned excellently for nearly two years, and even if the sale prices have not shown very large profits they have covered at least all depreciation as well as interest, and even made small profits possible. (The sale price of 24's during February, when the price of cotton was 6 cents, amounted to 38.39 cents net cash.)

A new law which came into force a few months ago made it possible for 10 per cent. of the members, at the beginning of April this year, to give notice to quit the agreement. However by means of the above mentioned customs duty, this group will be brought automatically to remain in the cartel. At present discussions are still in progress, and the matter may come once more before a Court of Arbitration, because this group refuses the payment out of the compulsory clearing, for the reason that the small spinners, which may take over the big firms pay too much and the large firms (which has already been pointed out, have no right to the compulsory clearing spindles, although they naturally desire to have them) receive cash in return. A compromise is being proposed, according to which spinning firms with 8,000 spindles will receive about 22 per cent of free spindles and graduating up to 29,000 spindles about 1 per cent free spindles. 30,000 to 39,000 spindles have nothing to give and nothing to receive. Mills of from 40,000 to 160,000 spindles should give up free *pro rata* 1 per cent to 4.5 per cent. Through this scheme there would be no payment from the compulsory clearing.

There exists no objection against the voluntary clearing and those clearings with imaginary spindles. The disagreement should very soon be settled, as the present good trade in Poland is attributed to the dollar collapse and the incentive to turn money into goods. This phase is already on the wane. It is, however, significant that this opposition has been the cause of a loss to the Polish spinners of about 4 cents!

Prague, June 9, 1933



TRADE RESTRICTIONS.

Paper to be submitted by Mr. W. H. CATTERALL, J P., President of the Federation of Master Cotton Spinners' Associations, Limited, to the International Cotton Congress, Prague, June, 1933.

AT the last Cotton Congress, held at Paris in June, 1931, the many papers upon " The Causes of the Depression of the World's Cotton Industry and remedies therefor " aroused a great deal of discussion. To all intents and purposes " Trade Restrictions " is only another title for the same subject, for whatever causes depression must necessarily be either itself a restriction or a cause of a restriction upon trade. In our own paper, for the 1931 Congress, we enumerated many causes of depression but elaborated mainly upon monetary restrictions and their consequences, and our then President, Mr. F. Mills, J.P., conveniently summed up our conclusions in the following words :—

> " My view is that the gold-standard policy is mainly responsible for destroying the purchasing power of our customers and prices must fall further if we remain dependent upon gold. My suggestion is that the monetary system should be considered by the various countries concerned, because I believe it is at the root of our troubles."

We were doubtless in advance of the times in expressing these views, then ; but they are the commonplace of to-day. Our views, our forecast and our suggested line of action, we venture to say, have since been completely justified.

When we debated the subject, in June, 1931, the Index of Wholesale Commodity Prices had already fallen by 61 per cent., as compared with 1920, and by 33 per cent., as compared with 1924. By September of the same year, 1931, sterling and other gold prices were down another 24 per cent. For March, 1933, according to The Analyst Index of Wholesale Prices, U.S.A., the price of general commodities was down to 80 per cent. of pre-war level, i.e., a fall of 40 points or 33 per cent. as against the level at the time of the 15th Cotton Congress. To such a severity of deflation has the world been committed by adherence to the gold standard policy !

Trade Since the War.

The relative positions of the several countries have been greatly altered since the departure of the sterling-linked countries from the gold standard in the last quarter of the year 1931. For our purpose, it is again necessary to review the post-war relations, especially, of the Lancashire cotton industry to the cotton industry of the world. We deal with two main periods.

We would take, first, the years 1921 to 1925, when our authorities were rapidly forcing the U.K. back to the old gold standard, followed by 1925 to September, 1931, in all, a full decade during which our industries suffered the two handicaps of an overwhelming public debt and the pre-war gold standard policy. No other country suffered both. Either, like the U.S.A., Switzerland and the Scandinavian countries, they suffered the pre-war gold standard, but not the debt, or, like Italy, France and Belgium, they suffered the debt, but not the pre-war gold standard.

In the second period, September 21st, 1931, onwards, we have joined Italy, France, Belgium and others and now enjoy a partial relief from the pre-war gold standard burden, but still suffer the disability of the debt.

In the first complete year off the gold standard, i.e., 1932, Lancashire showed a recovery in production, employment and trade, as compared with 1931. The greatest benefit accrued in the first four or five months and was still appreciable until the middle of the year 1932, when the lower sterling parity was still a significant offset against the gold price trend. The new parity was too closely tied to the dollar, however, to be an effective offset to the gold trend, and, in the last months of 1932, trade fell considerably below that of the corresponding months of the year 1931.

With the U.S.A. now dominating world finance, the monetary policy of the U.S.A. dictates the dollar price trend. It also dictates the trend of prices in all countries, whose monetary authorities attempt to maintain a relatively stable dollar parity. If the native currency does not move away from the dollar, internal prices fall as dollar prices fall. Japan, by forcing away the yen and thus counteracting the disastrous management of the dollar, is the only country that shows independence.

The Monetary Influence Explained.

We have yet to deal with many other trade restrictions, but before we turn to them we feel that it may be an advantage to attempt a simple explanation which will clarify the problem of the trade crisis.

Out of a babel of argument during the last few years upon causes and remedies for depression, there is now at least one thing upon which all our theorists and practical men alike are agreed. It is now said with one voice that higher prices are urgently needed. Hitherto we have been dominated by the doctrine "the lower the prices the better for the people." This theory is now completely discredited. But we have not as yet seen the reasoned argument to demonstrate the fallacy of the doctrine and the advantage of higher prices. Revulsion of feeling against this theory is rather intuitive than reasoned. The exact significance of uneconomic low prices cannot have been understood, otherwise we should not have submitted for so long to the policy responsible for low prices.

In meeting what we deem to be a long-felt want, we offer to our International Federation an explanation furnished by our economic consultant, Mr. E. E. Canney, M.A.

The Lower the Prices the Better

Consumers are also producers and must first sell their goods or services before entering the markets as customers But producers are all debtors and before they can spend they must first pay debt charges not only on personal debts but also on debts incurred on their behalf by their Governments

Let us first take the case of the producers of foodstuffs and raw materials How does the fall of prices affect them ? For every 10/- earned in 1924 they now earn only 5/- In 1924 their overall debt payments let us say were 2/ out of every 10/- Now we know that these debt charges still remain at 2/- but this 2/- is out of every 5/- earned Having in 1924 paid 2/- in debt charges they had 8/- left to spend on themselves They now have only 3/- left

If these producers could now buy in the wholesale market they would buy at prices just half of what they were in 1924 Say in both years they were buying cotton handkerchiefs at 1/ each in 1924 and at 6d each in 1933 *In 1924 with 8/- to spend they could buy* eight handkerchiefs In 1933 with 3/- to spend they can buy only six handkerchiefs This decline in quantities purchased also obviously applies to each and every 10 - of their actual earnings and to all their domestic requirements As consumers however they must purchase in the retail market in which prices have actually fallen only 20 per cent and not 50 per cent We explained the significance of this retail price disparity in our paper for the 15th Cotton Congress and we shall not now complicate the argument by taking it into consideration It is nevertheless of great importance

More important still however is the demonstration of the actual fall in the standard of living to all primary producers as the result of falling prices The lower price theory is fallacious when it ignores the fact of debt and other fixed charges If these had not to be paid out of what is earned a general fall in prices would not hurt the standard of living The sequence however is —we sell we pay our debt and other fixed charges and only the remainder is for our personal spending

The 50 per cent fall in prices has thus meant a fall in purchasing power out of actual earnings in the ratio of at least eight to six The individual may actually be purchasing seven but if so he must be using up his savings Alternatively he may be borrowing and getting deeper into debt In other words he is not balancing his budget a phenomenon now common to all forms of organized society

On the return of the 1924 level of prices his purchasing power and trade in general will revive to something rather more than that of 1924 Monetary management can just as certainly achieve this raising of the price level as it has achieved the fall in prices

What applies to each producer applies to all producers in the aggregate

Other Fixed Charges

Producers in all countries are also under contract to pay wages and salaries to a large army of officials and other public servants

The expense goes directly and indirectly to swell costs of production, and also to reduce the profit reserves required for replacing, improving and increasing equipment. If such payments are out of proportion to the prices we receive for our products, they both increase our losses and prevent our progress.

Among these fixed charges we would refer especially to payments made directly or indirectly to our Treasury Officials, to our Professors of Economics, to our Politicians, and to the members of our Banking and Insurance classes. We particularly select these for the reason that we have hitherto left the control of our monetary policy to them. They have been relied upon to establish monetary principle and practice. It is notorious that whilst we producers have suffered severely, those employed in these services have suffered practically no deprivation. Their scale of salary remains almost at a prosperity level; and they have enjoyed great advantage out of the fall in price level. True, in more recent times, they have suffered from increased taxation; but taxation has not increased in proportion with the low price level advantage. Moreover, it was not until the capital of our basic industries was largely exhausted that this taxation seriously increased. It is only lately that they have been called upon to bear a greater proportion of the taxation levied upon the country.

Unfortunately, it is a truth of great practical importance that no individual or class worries about changing conditions until they seriously suffer by them. Nor do they seriously concern themselves with inquiry into the policy responsible for those conditions.

We who are absolutely unprotected against the hurt of the fall in price level must obviously take the lead.

We are now united in suffering; and we should obviously combine not only in research but also in working for the application of practical remedies.

Nothing we can do either individually or collectively, by way of improving our process, machinery, or organisation, can counteract this destructive influence of fall in prices. It creates an environment in which we cannot survive. We are like fish out of water. Our only hope is to alter the environment, which, in conditions of falling prices, can only be remedied by raising the price level.

The important questions then naturally arise, how far should the price level be raised and how should it be raised?

As to the necessary high level of prices, we should demand such a level as will restore debts to a bearable proportion of our individual and national incomes. It will be a level that will restore us to a scale of commodity prices that will run in line with the scale of remuneration received by all sheltered services and especially by controllers of monetary policy.

There is, of course, an alternative, namely, that debts, labour costs, and service remuneration should be reduced to our present scale of prices, namely, to between one-third and one-half of what they were in times of prosperity, when these debts and scales of remuneration were first established.

International Cotton Federation Sub Committee Resolution

That we are not in any way unmindful of other trade restrictions is evidenced by our complete accord with the resolution of our Tariffs Sub Committee adopted unanimously at Brussels on 19th December 1932 This resolution is to our mind so important that we have no hesitation in adding the wording of its clauses to our present survey

> That this Sub Committee is firmly convinced that full recovery in world trade cannot be expected until
>
> (*a*) The existing tariff war is brought to an end
>
> (*b*) The present excessive customs duties are substantially reduced
>
> (*c*) Currency restrictions and quotas are entirely eliminated
>
> That in the interests of international trade it is desirable that steps should be taken by the Governments of the various countries concerned to bring into operation as soon as possible a universal nomenclature of tariff items which will remove one of the obstacles standing in the way of simplification of tariffs
>
> That whilst favourable to the principle of the Most Favoured Nation Clause it is of opinion that the present application of the Clause impedes the conclusion of special agreements between two or more countries for the mutual reduction of their tariffs
>
> That in the examination of the tariff position by each country it is necessary that accredited industrial representatives should be afforded the opportunity of consultation with officials of the respective Governments in order that the views of industry may be adequately represented and elucidated
>
> That war debts are the cause of many trading difficulties and a solution of this question must be found before any definite improvement can take place in international trade and commerce
>
> That in view of the approaching World Economic Conference this Sub Committee is also of opinion that the Governments of the various countries concerned should lose no opportunity of acting in accordance with the above suggestions which are matters of vital interest to the trade of the world

We are strongly of the opinion however that as practical men we should also examine the bed rock causes which have either brought these obvious restrictions into being or have greatly aggravated their effects As we have already remarked our financial authorities blame only these and similar restrictions Let us therefore take them one by one and explore deeper into their origins

International War Debts

International war debts have indeed been a serious handicap Yet in the early post war years when commodity prices were remunerative when our individual money incomes were large and when our national money incomes were proportionately great they were comfortably paid and that without bringing trade to a standstill

Again we advocate the principle that if producers are to be forced on to the gold standard scale then all interests should be put on the same scale the debt service included Alternatively if debts are to remain at the war scale at which they were incurred then our producers must again be allowed to enjoy the war scale of remuneration Equality is not only equitable In the long run it is the only practical basis because under existing discrimination as against debtors in favour of creditors it looks probable that debts will be entirely repudiated

Credit Restrictions

We recognize that the declining value of our capital assets due to lack of profit and to losses due in turn to falling prices makes credit restrictions inevitable Currency deflation is primarily responsible

Exchange Restrictions

Much has been said about currency exchange restrictions since our departure from the gold standard Before expressing an opinion let us examine the steps leading to their imposition We suggest that the following sequence is the experience of all countries

(*a*) Deflation and fall in prices
(*b*) Decline in purchasing power and trade
(*c*) Decline in national income and failure to balance budget
(*d*) Inability to meet debt charges and flight of capital abroad
(*e*) Drain on gold resources and then we have currency exchange restrictions imposed

What authority imposes these restrictions and what is their purpose ?

Our answer is the Central Banking Authorities with the purpose of preventing any greater fall than is absolutely forced upon them in the exchange value of the native currency and to secure the gold hoards These Central Banking Authorities then are still working under the gold standard obsession They still deem a hoard of gold to be essential security whatever other securities are allowed by law and they are not content to let the currency fall in exchange value to such a level as would naturally preserve the gold hoard These exchange restrictions are not asked for by business men who undoubtedly suffer from them Those who benefit are the principal creditor interests whose sole consideration it seems is to preserve the currency and the debts fixed in that currency at as high a level as possible If these points were generally understood the producers of each country would soon bring an end to these currency restrictions

Instable Exchanges

We may have been deceived into accepting exchange restrictions by the plea that stable exchanges are indispensable to trade Those of us who are able to carry our minds back over the past dozen years however well know that stable exchanges are not necessary They are minor conveniences it is true but any minor difficulties in exchange fluctuations are easily provided against in a free exchange market

The years 1921–24 are not so far distant that we cannot recall the infinitely better trading conditions then obtaining despite the violent exchange fluctuations shown in the following table —

EXCHANGE VALUE OF THE £ STERLING

(According to Whitaker's Almanack)

Centre	1921 average Max	1921 average Min	1922 average Max	1922 average Min	1923 average Max	1923 average Min	1924 average Max	1924 average Min	
New York	4·288	3·500	4·660	4·190	4·723	4·258	4·734	4·207	dollars
Paris	61·45	45·62	72·20	47·40	86·70	68·45	120·25	65·60	francs
Brussels	61·65	45·67	79·80	50·73	107·20	68·05	112·25	94·38	francs
Rome	108·62	71·75	114·00	81·00	108·5	89·5	138·5	76·63	lira
Shanghai sterling to tael	4 2¾	2 11½	3 9	3/–	3/5¼	3/–	3 5⅞	3/1¼	tael
Yokohama pence to yen	2 8¾	2/4⅜	2 3½	2/1$\frac{3}{16}$	2 3$\frac{1}{16}$	2 0½	2/2⅛	1/7$\frac{1}{32}$	yen

Variable exchanges are no very serious handicap unless we are prevented from hedging against exchange fluctuations. All we need is that the currency exchange futures market should work as freely as the cotton futures market. We should all like cotton prices to be absolutely stable, but no import or export contract is ever prevented by fear of fluctuations in the price of the raw cotton. The cotton futures market provides adequate safeguard to both the buyer and the seller of cotton or cotton goods. It would be suicidal of us to ask our Governments to close the cotton futures market. Contracts for more than a day or so ahead would be impossible. Exchange restrictions are comparable with closing the cotton futures market; and the Governments that impose them, out of consideration for their creditors, sign a death warrant upon industry and trade.

International Liquid Capital.

A vast amount of international liquid capital is bulked in the hands of international finance and is transferred, with telegraphic speed, from one country to another as interest or fear prompts the holders. The world, in this respect, is like a ship that has been holed, without the captain taking the necessary precaution to close the bulkheads. As the ship rises and dips upon the waves, the water, pouring in, washes from end to end of the ship, which inevitably founders. The ship of world trade is in precisely the same condition. Just as soon as one or more countries succumb under the burden of falling prices, so there is a flight of the frightened capital to other countries, aggravating not only the condition of the first but destroying the competitive power and dislocating the trade of the country in which this money finds sanctuary. We invite the members of our Federation to join with us in our demand that our trade be completely insulated against the disturbing movements of this liquid capital. It consists almost entirely of swollen debt claims and monies accumulated out of debt payments. It has little or nothing to do with legitimate trade. The remedy in this case, as in others, we are convinced, is to alter the objective of monetary management.

Monetary authorities are still obsessed with the idea that stable exchanges are vital. The objectives of the monetary management, which we would recommend, would be first to raise the internal scale of commodity prices to such a high level as is found necessary to restore prosperous industry and trade. This requires, at once, a deliberately controlled emergency expansion of the currency. The second objective follows the achievement of this higher level in prices, and that is a future stable price level for general commodities, which will, of course, involve a normal expansionist monetary policy in proportion to the normal expansion of industry and trade. The index to be watched, in the course of this monetary management, will not be that of the exchanges but will be the internal index of wholesale commodity prices, which, in the first stage, will rise to the 1924 level or some more equitable level and which, in the second stage, will thenceforward remain practically stable. With these objectives for internal policy of monetary management, no power on earth can prevent its consummation in the countries that attempt it. Panic inflows or outflows of this international liquid capital, will be automatically compensated for by internal monetary management. The internal price level and the trading position will not be affected. Countries adopting this policy will then enjoy the only monetary stability that serves any good purpose to industry and trade, namely, a stable internal level of commodity prices. Whatever is practicable in stabilizing the exchanges will then naturally follow between all countries whose internal price levels are stabilized.

Decline in International Investment.

We can deal briefly with this restrictive influence upon trade. Why is there a contraction in international lending? Simply for the reason that most industries and most countries are in a state of depression, and, without going into the long chain of reasoning again, we again attribute this to the decline in prices.

Decline in Confidence.

Our political and financial authorities attribute many of our trading difficulties to lack of confidence, but are not at much pains to enquire into the reason for this lack of confidence. There is a half suggestion that our commercial men are simply lacking the necessary enterprise. But what are the tangible facts behind the decline in confidence? Traders when they buy do so in anticipation of selling at a profit. They must be reasonably certain that the final consumers not only wish to buy more, but can afford to buy more. Confidence is lacking because traders, especially those in contact with the actual consumers, can see no evidence that the final consumers can afford to buy more. Their spending power must be declining if prices are falling. It is the obvious, but apparently unavoidable fact that the real impetus to trade revival must come from the consumers. But the great masses of consumers are at the present time handing over a large part of their legitimate spending power to the money-lending interest. They must continue to do so until such time as a general rise in commodity prices reduces the proportion of their debt charges.

Gold Hoarding.

The gold standard system is notoriously subject to abuses of the available gold supplies. The monetary authorities blame the abuses, and as a rule participate in the abuses. But it is the other monetary authorities' abuse that each condemns. We condemn the monetary system which leaves itself open to such abuses. If it be sound, it will not be liable to such abuses that nobody can do anything to prevent them.

The worst abuses inherent to the gold standard system are conveniently summed up in the word "hoarding." There are, however, several types of hoarding, some excusable and others not.

Private hoarding in a primitive condition of society where there are no local banking facilities is a necessity. The people have no other way of putting their savings by in a liquid form. Then in countries well provided with banking facilities the absence of private hoarding is dependent upon confidence in the local banks. If they the banks are involved with the local industries in severe depression the private individual loses confidence converts deposits into gold or gold notes and then keeps his savings under his own eyes. The fault is not his but lies at the door of those who have been responsible for the general depression. The latest of many outstanding examples has been seen in this year's run on the American banks. In that country the new President has invoked the law against private hoarding and is achieving a great measure of success. But only an increase in dollar commodity prices with consequent trade revival will permanently bring to light all private hoards.

Gold hoards in the Federal Reserve Bank should also be subject to the President's attention. These hoards are just as hurtful as private hoards. They give confidence it is true to the money lending interests but they destroy the elements of confidence in the business community.

Since 1929 the Central Bank of France has increased its gold holding from £272 000 000 to £649 000 000. The position of the principal European Central Banks in relation to this problem of gold hoards is shown in the following table —

GOLD BULLION IN THE PRINCIPAL EUROPEAN BANKS MARCH 9TH 1933

(in million pounds sterling approximately)

	1933	1932	1931	1930	1929
England	161	121	142	153	152
France*	649	606	449	342	272
Germany†	36	40	104	116	130
Spain	90	90	97	101	102
Italy	63	61	57	56	55
Netherlands	85	72	37	36	31
Belgium	75	73	40	34	26
Switzerland	89	65	26	22	19
Sweden	11	11	13	14	13
Denmark	7	8	10	10	10
Norway	8	7	8	8	8
	1 274	1 154	983	892	818

* Bank of France as reported in the new form of statement

† Bank of Germany exclusive of gold held abroad i.e. £1 905 800

The Price of Silver

Another of the more obvious hindrances to the recovery of world trade and especially in the Near and Far Eastern markets is the low price of silver and the fall in the exchange value of the tael. A low valued tael makes our goods too dear.

The English Federation has given very careful consideration to this important question with the result that the following resolution was adopted —

> That we urge upon the Government without prejudice to our present position of being off the gold standard the retention

> of gold and silver in our monetary affairs and the more extensive use of silver in the coinage, and urge upon the Government to take international action at the earliest possible opportunity with a view to increasing the price of silver, which should be stabilised at a minimum price of 24 pence to the ounce, and its ratio to gold gradually raised to twenty to one."

We have also approved of the terms of a resolution on the subject adopted by the Silver Association of Great Britain which reads as follows :—

> " The Silver Association, which for the past two years has advocated the rehabilitation of silver, welcomes the action taken by the United States Congress in empowering the President to pursue that policy, and urges H.M. Government to co-operate with the American Government in the matter at the forthcoming World Economic Conference."

Tariffs, Boycotts and Quotas.

Tariffs, boycotts and quotas, as all forms of the same kind of restriction, we lump together. We strongly endorse the resolution of our Tariffs Sub-Committee upon these restrictions. No trade, we believe, has suffered more than ours by these direct restrictions.

It is also true that tariffs comprise one of the links in the chain that drags down world prices to lower levels. Creditor countries that utilise tariffs to prevent the inflow of goods force the debtors to pay in gold. The demand for gold must thereby be artificially increased, and more goods must be paid to get the gold. In which case the gold price of general commodities must decline in that proportion by which the demand for gold is increased by the tariffs.

But what are the conditions that lead to the adoption of protective, and, in some cases, prohibitive tariffs ? They are certain perfectly legitimate excuses for tariffs ; as, for example, when a country wishes to help a new industry over the first difficult years of its existence. In a world, also, that has not yet found it possible to dispense entirely with war, tariffs may be utilised to establish those industries which, in emergency, can be diverted into the production of war materials. There are of course other and perhaps better ways of artificially stimulating these industries ; but the tariffs work and are therefore excusable.

In a normally progressing world, however, quite moderate protective tariffs are, and, on occasion, have proved sufficient to achieve the purpose of national security; and, in the known periods of expanding world trade, such tariffs have proved no serious obstacle.

There is, however, another aspect of the tariff problem, the reasons for and causes of which require deeper investigation to ascertain. We have an indication of what to look for in this fact, namely, that the times of seriously rising tariffs have always been associated with world depressions and with falling prices. The sequence is as follows :— We begin with deflation. Prices fall. World trade declines. World trade is not sufficient to sustain the established productive equipment and personnel of the several industries that compete for world trade. Normal healthy competition is displaced by a ruthless fight for survival.

Each native industry seeks to preserve at least its own market for itself Declining profit and growing unemployment also makes the protection of the home market a national affair This is more especially the case when the export trade to the native industry is a comparatively negligible consideration In this case prohibitive tariff policy is unhesitatingly adopted

As for consumers within these rising tariff walls they of course pay more than they otherwise would but if the tariffs are imposed upon a precipitously downward sliding scale of prices and if wages remain comparatively high they have no reason for complaint

Then we have the case of the country and its industries that have been largely dependent on their export trade In the early stages of depressions in such industries for example as the Lancashire cotton industry with its products mainly destined for overseas markets protective tariffs are both useless and dangerous They are useless because they affect a comparatively small proportion of the goods produced

They are dangerous because they provoke the retaliatory policy of protective tariffs in essential markets abroad We are then deeply impressed with the view i e in the early stages of depression that there is little or no sense in trying to cure one trade restriction by establishing another trade restriction After a prolonged period of chronic world depression however other considerations become uppermost If as was the case in our own country prior to September 1931 monetary policy places our industry under the competitive disability of a seriously overvalued currency as compared with other currencies we are prone to alter our minds We slowly realise that this monetary disability actually confers on our foreign competitors a competitive advantage It is comparable with putting a tax on our own production and is thus the opposite to a protective tariff In such conditions it is possible (and we have realised the possibility) for our industry almost to be driven out of the world market our home market included According to our actual experience this past dozen years it is further possible to lose so much of world trade that the home market ceases to be a comparatively small consideration Our export trade actually falls below the total cotton consumption of our home market In such circumstances and especially under extreme provocation by prohibitive tariffs raised against us in other countries it is natural that tariff retaliation becomes uppermost in the minds of even the strongest former advocates of Free Trade We seek tariff compensation against the monetary disability and a great Free Trade country such as ours is driven in desperation to the tariff relief And again our home consumers have little or no cause to complain because the tariff is offset by a downward trend of prices

We are here classing prohibitive tariffs among the secondary consequences of trade depression as the results of primary consequences with deflation very largely responsible We support this view by reference to the prolonged periods of monetary depression in the 19th century when tariffs invariably rose to prohibitive heights in all self governing countries As again substantiating this view we would point to the fact that all effective trading negotiations between countries involving tariff reductions in the 19th century took place in times of rising prices. Rising prices gave general relief and expanded world trade. Then the abandonment of tariffs occasioned little or no anxiety to home industries. Consumption again set the pace for production.

May it not now be likewise true that, in order to realise the objects laid down by our Tariffs Sub-Committee, we must again be helped by a rise in general commodity prices?

Prospects of Relief on the Gold Standard.

As in centuries past, so in the 19th century, world relief from falling prices was always caused accidentally, namely, by the discovery of enormous new resources of the precious metals. With monetary facilities based on and limited by the precious metals, no other relief was possible. The fundamental defect lay in the policy and system that based the money quantity on these precious metals (gold and silver) and in all the abuses to which such system is inherently, inevitably, and irremediably subject. The same system still obtains, yet it now stands as a universally accepted and incontrovertible fact that no such accidental relief, as new discoveries of gold, can ever occur again. Gold output is on the downward trend, and cannot possibly keep the pace which would satisfy the needs of expanding industry and trade on the gold standard. There is a faint possibility that abuses may be moderated; and we look mainly to the gold hoarding centres to give the lead. But we cannot rely upon them; and they could give no permanent guarantee.

So we are at last face to face with the fact that we depend for survival and reasonable security upon the invention of a new system of monetary management, which will free civilisation from the destructive influences of the variable money unit. We cannot sit and wait for another accidental relief. This is the great problem of our time and generation.

Our fathers, no long distance back, were responsible for the Industrial Revolution, which, by scientific discovery and practical application through inventions, has made the world capable of sustaining a much larger population than now exists in the world, and also at a greatly enhanced standard of life. Notwithstanding their efforts, we are actually set on the downward course; and this we are convinced, is because there has been no corresponding revolution in monetary management. The present monetary system has no relation to scientific principle. It is both primitive and obsolete. Its inherent abuses have root in fundamental human nature, which, for practical purposes, cannot be altered. They have root also in an inhumane money-lending code, which obstinately insists as being moral and just, upon the full repayment of debts even though the currency in which they were first expressed doubles and trebles in real value. This monetary policy and this debt code are as unreasonable as they are unjust; and every country that submits to them asks for trouble, and suffers it in full measure.

Professor Siegfried remarked in his paper for the 15th Cotton Congress, "We are at a crisis of low prices, of a very slow and long duration" and at "a crisis of the liquidation of the war which is only being felt really to-day" and "at a movement of the development of the centre of gravity of the economic world." In this our present survey, we have laid particular stress on the first two aspects emphasised by him. We are of the opinion that the third will naturally re-adjust itself when the first two are remedied.

Monetary Remedies.

We, the producers, are the chief sufferers from monetary mismanagement. We have had more than sufficient incentive to research and action. Though sadly impoverished, we have still many millions of pounds of wealth yet in our keeping. We are, therefore, of the opinion that it is well worth our while to spend whatever time and whatever expense proves necessary in ensuring relief.

We urge upon the members of our Federation that it is time for self-help measures on our own part. It may not be for us to decide the exact details of sound monetary management; but it is surely for us to lay down the fundamental principles to which monetary policy must conform. We must at least understand these principles and we would here attempt to enunciate them, at the same time asking for your co-operation in more exactly and clearly defining them.

Elementary Principles of Monetary Control.

We incline to the view that the following principles are the primary essentials of sound monetary management:—

(*a*) Control of currency quantity vested in a public authority that will ensure fair play for all interests, debtors as well as creditors.

(*b*) Control of currency quantity to assure an adequate supply of both currency and credit to meet the needs of expanding industry and trade.

c) Control of money quantity, in this present emergency state of trade dislocation, first, to raise internal prices to such a level as will result in an aggregate national money income sufficient to meet debt payments, improve the standard of life and afford a reasonable profit to industrial and commercial enterprise.

(*d*) Control of money quantity, subsequent to the emergency period, to maintain the general commodity price level constant. The currency should be fixed not in so many grains of gold but in a certain quantity of general commodities according to the Wholesale Index of Prices.

(*e*) Control of the money quantity so as to keep the internal price level constant, with exchange parities left to strike their natural level and with the price of gold left to the free interaction of supply and demand.

Conclusion.

The International Chamber of Commerce has approved of certain recommendations for the prompt removal of barriers to "the restoration of the normal interchange of goods and services," as among the most vital measures required. We subscribe to their view that it should be possible for the Monetary and Economic Conference, pending more drastic steps towards their entire abolition, to obtain an undertaking from Governments not to promote any further throttling of international trade by these means nor to build such temporary expedients into the permanent structure of national economic protection We agree also that at the same time such a temporary standstill agreement must not be taken as an excuse for delaying the essential task of removing such barriers altogether

The Lancashire Cotton Industry figured prominently in inaugurating and building up the International Federation of Master Cotton Spinners and Manufacturers Associations Our members joined together for the express purpose of co operating for our mutual benefit But the present trade position now threatens the very existence of all such organisations as ours Available world trade is far from sufficient to go round and though we gather together here in an atmosphere of perfect good feeling we know that each constituent member away from this conference is compelled to take measures that are detrimental to the wellbeing of other members We are engaged in a crude fight for survival and our methods are likewise crude We are pressing for tariffs against one another We are asking for subsidies We are under cutting one another at a loss We are thrust into such courses (are we not ?) partly because we ourselves have failed to do anything effective to restore a reasonable measure of world trade Our minds have been absorbed with efforts to make the best of impossible circumstances With declining world trade each of us has concentrated almost entirely upon devising means to preserve or increase his share at the expense of the rest We here and now would suggest that concentration on the means of increasing world trade is the only satisfactory course In taking so strong a stand upon the need for co operative action for reform of the monetary system we trust we shall be understood to be actuated by motives for the common as well as for our own good

We concluded our paper at the 15th Congress in the following terms —

> A sound monetary system conforming to the principles of monetary science capable of adoption by all countries and free from the danger of the abuses to which the present system is subject is the world s greatest need

We feel that if we can achieve this we can achieve everything We shall be at the dawn of a new era first initiated by a rapid trade expansion and then followed by such a steady rate of progress as we have never before experienced If we cannot achieve this then we fear that we can achieve little or nothing The problems of other trade restrictions may prove insuperable We shall be left at the mercy of gold hoarders and at the mercy of monetary authorities who have unquestionably little consideration for the advancement of industry and for the peace and progress of our several countries

Effects of Futures Trading upon the Cotton and Cotton Yarn Markets.

Paper by Dr A B COX Director of the Bureau of Business Research Austin University Texas for the International Cotton Congress at Prague June 1935

TRADING in cotton futures is a highly specialized method of dealing in cotton values These values are measured in terms of a particular grade and staple length as the base of the contract such as middling in but in every case the seller of the contract has the privilege of delivering other grades and staple lengths on his contract at their commercial premiums above or discounts below the contract quality The cotton futures contract is thus designed to enable the trader to deal readily and safely in cotton price levels or values These characteristics of the contract make it liquid and thus readily responsive to all influences calculated to affect the value of cotton

Trading in cotton futures contracts must not be confused in any way with trading in contracts for forward delivery of cotton The latter is a spot cotton contract It specifies specific qualities of cotton without privileges of substitution at the time of delivery without the consent of the buyer These trade are made in the spot markets and prices are fixed in terms of futures In other words if on March 23 John Doe buys one October New York contract at 6 55 cents that is a trade in futures On the other hand if on March 23 Henry Roe in Boston buys 100 bales of M in cotton from John Doe at 110 points on October New York n buyer s call for delivery in October that is a spot cotton contract

Spot cotton trades are made with the full intent of delivery and receipt of the specific description of cotton The futures trades are made in the main either for the purpose of hedging or for speculation and if the markets function properly the best interests of both the traders and the public are best served by offsetting transactions in the settlement of contracts rather than by the delivery and receipt of cotton called for in the contracts A cotton merchant e g buys cotton in the rush of the harvest season for which he has no immediate outlet He protects himself by selling contracts for future delivery against the purchased cotton to prevent speculation It is his business to class that cotton and find a buyer for it Normally he sells the cotton to some spinner or foreign merchant importer and at the time the price is fixed he removes the hedge made in the futures market by buying contracts equal to the number of bales sold and on which the price is being fixed It would be extremely uneconomical if the merchant because of being squeezed had to deliver his cotton on his futures contracts and then re-purchase it. Frequently the cotton would have to be re-classed and always re-grouped. Moreover, all the expense of delivery would count for naught in merchandising the cotton to spinners.

It is even more uneconomical for the spinner to be forced to take delivery on futures contracts used as hedges of yarn sales because he has little or no chance of getting the exact quality of cotton he requires. He would find himself in the cotton merchandising business.

There are only eight cotton futures markets in the world; three of these—New York, New Orleans and Chicago—are in the United States of America; three are in Europe—Liverpool, Le Havre and Bremen; one in Bombay, and the other is in Alexandria.

COMPONENTS OF THE PRICE OF COTTON.

The price of any specific description of cotton to be delivered at a particular place and time, under specified delivery and settlement terms is made up of three parts. The first and most important is the price level; the second is the basis; and the third is grade and staple differences. The first one of these, the price level, is made by the trades in the futures markets. The futures markets are, for reasons already mentioned, the clearing houses for information, and the trades based on that information establish the price of futures contracts.

The "basis" may be defined as the relationship between the price of futures contracts in a named market and specified month of delivery and the price of the particular quality of spot cotton of the description used as the base of the futures sold under specific delivery terms. For example, a merchant in Houston, Texas, may offer on March 23, 100 bales of M. ⅞-in. cotton at 125 "on" October New York, f.o.b. Boston, buyer's call, last half of September shipment settlement to be made according to New England mill rules. In this transaction the basis is 125 "on."

The price of the basis is made in the spot markets. Technically the basis as a separate part of the total price of cotton dates from the establishment of cotton futures markets. The practice of selling cotton for forward delivery on call, especially since the World War, has given special prominence to basis as a part of the price of cotton.

The premiums for grades and staples better than those of the base of the futures contract and the discounts for the grades and staples poorer than those of the contract are made in the centralising or big spot cotton markets.

If cotton futures markets function as they should and usually do, the price of futures contracts represent the predominance of opinion as to the value of cotton. Total volume of cotton determines the price level for cotton. Changes in total supply of cotton and the demand for it are the factors which cause changes in cotton price levels. These demand and supply forces are evaluated in the futures markets insofar as cotton is concerned. Thus a change in the volume of supply makes itself felt in the futures markets through a change in the volume of hedges or in speculation. Likewise, a change in the volume of demand manifests itself in the futures market in the same way.

The futures markets are more volatile than the spot markets They not only move up and down more readily but their ability to expand and contract in terms of volume is equally as significant This elasticity in the futures markets is due to the concentration of a large volume into a few markets, and more especially because most of the speculation centres in them A very large prospective crop finds its way into the market long before the cotton is actually harvested The decline in the price of cotton futures contracts ahead of the actual movement of a large crop of cotton tends to prevent the accumulations of excessive supplies by broadening the outlets for cotton by starting it into heavier consumption quicker than would otherwise be the case

Trading in futures establishes the price level for raw cotton The price level for cotton means the price of cotton relative to the price of other things or the buying power of cotton In the main, changes in this price level are the result of changes in supply of cotton itself in changes in demand and in changes in the value of money In fact, statistical calculations demonstrate that over 90 per cent of the change in price on an average is traceable to one or all of these three factors They are evaluated for cotton by trading in cotton futures markets Trading in cotton futures affects the cotton and yarn markets by establishing the price level for raw cotton

As already pointed out, the spread between what the spinner pays for a specific description of cotton at a specified place and time is made up of two parts one is called the "basis and the other is the "price paid for grade and staple differences above or below the basis of the futures contract"

The price of the basis on raw cotton is made in the centralizing or big spot market It is made up of costs and profit Costs may be subdivided into four parts as (1) direct costs such as freight, compression, weighing, a certain amount of interest, and other costs necessary in moving cotton from its present location to a specified point of delivery, (2) carrying costs which consist of interest, storage and insurance, (3) overhead costs such as salaries, office rent, stationery, telephone, telegraph, cable charges, and other similar costs, (4) a sufficient profit to cover uninsurable risks Given the locations of the seller s market and the buyer's market, the spread between the price of cotton in the consumer's market and the seller's market or the spread between the price of futures, and the price of spots in either market can be calculated fairly exactly on an average The buyer who knows these costs is certainly in a position to know when he is getting a cheap basis

Trading in futures contracts affects the basis only to the extent that the price of futures contracts can be forced by manipulation or otherwise out of line with true values If the price of contracts is squeezed up, as occurred in American cotton futures markets in the spring of 1930, the merchant's buying basis based on futures widens and his selling basis narrows The total spread between the price of cotton in the merchant's market and the price in the spinner s market may remain exactly the same The owner of the basis stands to lose at such times whether he be merchant or spinner

Price differences for different grades and staple lengths are matters of the supply and demand for the different grades and staples The proportions of the different grades in a crop ar determined almost entirely by the weather at the time of harvest Causes of variations in staple lengths are much more numerous The principal causes are the variety of cotton planted, the amount of rainfall if cotton is rain grown the quality of the soil and the length of the growing season On the side of demand the shifts are not so pronounced, but changes in quality of goods demanded may change relative values of different grades and staple lengths to the spinners An outstanding example of this change is the substitution of medium and short-staple cotton for long staple cotton in the making of automobile tyres

The difference petween the spinning wastes of the different grades of cotton account for the larger part of the difference in value between the different grades The difference in the value of the different staple lengths is measured largely bv the difference in the counts of yarn they will spin

Cotton yarn prices are governed largely by the price of cotton in the sense that cotton prices move more quickly than the yarn prices On an average yarn prices are related to cotton prices in terms of cost of manufacture Thus the spinner has four elements to take account of in bargaining for the sale of his yarn The first is his own cost of manufacture, the second is the price level of cotton or the price of futures contracts the third is the basis and the fourth, grade and staple differences for the quality of cotton required In most cases the last two are quoted by the cotton merchant to the spinner as one item The spinner in Boston, e g is accustomed to having the merchant quote him, let us say S M $1\frac{1}{16}$ in cotton at a named number of points "on" New York In this case the merchant's basis for cotton f o b Boston on M $\frac{7}{8}$ in might be let us say 100 "on" May New York and his basis on S M $1\frac{1}{16}$ in might be 175 on May New York

This more or less fixed relation between the price of raw cotton and the price of yarn makes changes in the relationship one of the best forecasters of cotton price changes available If, for example, the price of cotton moves up considerably and spinners are not able to advance the price of yarn a proportionate amount, it is strong evidence that the price of cotton will decline On the other hand if the spinners are able to advance the price of varn because of a heavy demand it means that there will follow a stiffening of cotton prices Trading in cotton futures affects the cotton yarn market to the extent that it makes the price level for raw cotton, and may affect the basis for raw cotton if for any reason the price established does not represent the true value of cotton

Effects of Futures Trading in Cotton on the Raw Cotton and Cotton Goods Markets.

By GEORGE R. SIEDENBURG, of Hubbard Bros. & Co.,
Representative of the New York Cotton Exchange.

A DISCUSSION on the effects of futures trading in cotton upon the raw cotton and cotton goods markets is particularly timely. A striking demonstration was given in the United States only a few months ago of the conditions which would prevail if there were no futures exchanges in the cotton industry. I refer to the closing of the American cotton exchanges during the bank holiday, extending from March 4 to March 15. To be sure, trading in cotton futures continued during that period on the exchanges of Europe and the Orient, but since dollar exchange transactions were suspended it was impossible to interpret prices at Liverpool, Alexandria, Bombay or elsewhere in terms of American cents.

In the raw cotton trade, the closing of the American exchanges was immediately followed by an almost complete suspension of buying and selling operations by large and small merchants all over the country. Fortunately, this occurred at a time of the year when producers and other first hands had already disposed of the bulk of the new crop, and so the virtual suspension of buying was much less serious from the standpoint of growers and small country merchants than if it had taken place in the midst of the marketing season a few months earlier. The most serious consequence was from the standpoint of the spinner. The spinner immediately found himself without any reliable basis of knowledge as to cotton prices, and deprived of means of immediately covering forward sales of goods by purchases of forward commitments of the raw material at fixed prices. Mill men found themselves at the mercy of wild fluctuations and still wilder rumours with respect to what cotton was actually worth.

The day when exchanges were closed, President Roosevelt delivered his inaugural address, in which he referred to the need of "an adequate but sound currency." This statement by the President, together with the national banking moratorium, led many people to jump to the conclusion that the country was in for inflation via currency depreciation. This was immediately followed by reports that cotton had sold up to a basis of 8.50 cents for middling seven-eighths inch cotton, as compared with about 6.25 cents when the exchanges were closed. The fact that sales were made on the 8.50 cent level was readily verified, but, with the exchanges closed, there was no way of ascertaining whether these sales were to be regarded as isolated transactions or as the suddenly revised consensus of world market opinion. In other words, the trade was completely at sea as to what interpretation to put on this reported advance. It was soon found, however, that it was of a most temporary and artificial character, since it was discovered that there were wide spreads between bid and asked prices at the same time, and wide fluctuations in the prices at which actual trade took place. Within a day or two, the generally reported price was down to about 7.25 to 7.50 cents.

When the exchanges closed, large and small merchants immediately widened the spread between their bids and their offerings on a fixed price basis, since, being unable to hedge, they incurred risks which no one could measure. Business was practically halted, as their bid prices were below the levels at which most first hands would sell and their asked prices were above levels which most spinners would pay. They continued to make offerings to spinners in terms of points on futures contracts on the exchange, but since there was no trading in futures, spinners could not convert these basis prices into fixed prices. These conditions resulted in an extraordinarily wide margin between the prices received by first hands and those paid by spinners on the limited amount of business transacted.

Meanwhile, cotton goods markets went through a hectic experience of the sort which sound merchants do not relish. When it was rumoured in the goods trade that cotton had soared more than 200 points, a strong demand arose for certain classes of cotton fabrics, and these goods likewise jumped by the equivalent of about two cents a pound. This demand was largely speculative, since most of the conservative merchants realized how undependable the reports of cotton prices had become with the trade disorganized by the closing of the exchanges and with the temporary elimination of the great central markets. The sharp uplift in cloth prices was profitable to a few operators who managed to get in and out again quickly enough, but it brought losses to other traders who were not so nimble, for the cloth market soon broke again and no small portion of the goods which had been bought on the advance was re-offered for sale and these re-offerings depreciated prices on new transactions. Fortunately, the turnover of goods on this short-lived bulge was comparatively small and was limited mostly to goods in stock, for otherwise the aftermath would have been most disastrous.

Most merchants who were accustomed to follow the principle of operating on a reasonably safe basis, with a view to sound profits over a long period rather than quick and easy gains, sold goods in only very limited volume while the exchanges were closed, except goods out of stock, since it was almost impossible to cover their sales of goods immediately by purchases of the raw material at prices which they knew to be truly competitive. They found variations of 75 to 100 points in asked prices for spot cotton in different parts of the South at practically the same time. Instead of being able to ascertain the cost of their raw material by a local telephone call to their broker, they found it necessary to canvass many points in the South, and until they had done so they could not be sure of obtaining the amount of raw material which they needed at prices which would leave them a manufacturing margin. Lacking a dependable basis for judging cotton values, and facing uncertainties as to what they would have to pay for cotton to cover their cloth sales, they added substantial amounts to their asked prices for goods to cover the added risks involved in the business.

It will be agreed needless to say that business in raw cotton and cotton goods during the period in question was handicapped not only by the closing of the cotton exchanges but also by the closing of the banks and it would be unreasonable to attribute the virtual halting of trade in the cotton and cloth markets entirely to the lack of futures trading facilities It may also be readily admitted that the growing merchandizing and consumption of cotton would not come to an end if there were no futures exchanges But the closing of the exchanges during the eleven days in question costly though it was in lost business and disruption of prices served a most useful purpose by showing how much more hazardous more erratic and more costly would be the merchandizing of cotton if there were no exchanges for an indefinite period and how greatly all who are interested in cotton from growers to distributors of cotton goods benefit from the functioning of the futures exchanges in facilitating the free flow of trade The exchanges were not closed long enough to show what would be the full effects of the lack of them but the eleven days of closure were sufficient to bring forth a tremendous demand for their reopening

The experience of the raw cotton and cotton goods trade during the eleven days when the exchanges were closed confirmed the generally accepted beliefs as to the effects of futures trading on the cotton and cotton cloth markets It showed beyond contradiction that the cotton exchanges by recording a publicly known price for a basic description of cotton based on supply and demand forces from all over the world exert a powerful influence in reducing the spread between prices in different parts of the trade at any given time It brought to the world s attention the fact that the merchants who finance and store cotton from the time when it leaves the grower to the time when it is taken over by the spinner cannot assume the risks involved in buying and selling cotton on a fixed price basis so long as they are organized as at present It immediately brought clear cut evidence that if there were no futures markets and cotton merchants and cotton spinners were obliged to assume the risks in operating on a fixed price basis without the protection of hedges in the form of futures contracts they would demand and would have to have wider margins to cover the great increase in risks thus widening the spread between the price which the cotton grower receives for the raw material and the price which the consumer of cloth pays for the manufactured product

The establishment of a practically uniform price for cotton through the concentration of buying and selling on the cotton exchanges and by the conducting of trade by open outcry on those exchanges is one of the most obvious effects of futures trading in the staple It will surely be agreed that uniformity of prices at any given time is most desirable from the standpoint of everyone in the trade It gives greater assurance to the grower that he will obtain the full market value for his product It reduces a form of speculation which would serve no useful purpose It puts spinners on a more even footing as to the prices which they pay for their raw material It enables spinners and weavers to make more exact calculations of the margin between costs of raw material and selling prices for manufactured goods If there were wide variations in prices from one point to another for the same description of cotton and at the same time, merchants and spinners would have to keep continuously in touch with many more points of supply than at present to make sure that they obtained their requirements at minimum levels.

In the absence of world markets as represented by the exchanges even a small demand concentrated at a point of still more limited supply could result in sales prices well above the generally prevailing level, while even small offerings concentrated at points of still more limited demand could result in prices well below that level. Buyers and sellers would have to be constantly on their guard against being misled by reports which implied that the general level of cotton values had changed but which were based on only isolated transactions in negligible quantities. Growers, merchants and consumers of cotton are so accustomed to being able to ascertain the value of cotton in all markets of the world by simply telephoning to a local broker or by consulting the daily paper, thereby obtaining with minimum of effort the quotations publicly established by world supply and world demand on the futures exchanges, that they do not realize the tremendous service rendered by the exchanges in keeping cotton prices uniform.

The elimination of major price risks in the handling of cotton is another effect of futures trading which is of profound importance to the entire cotton trade. By being able to hedge their holdings and commitments, merchants and spinners can eliminate from their operations all price risks except those relatively small ones involved in the "basis." When conditions are such that they wish to take a position in the market they can do so, but when they do not wish to take speculative risks they can avoid them. Without futures exchanges they would have to be speculators practically all of the time, regardless of conditions and prospects. To be sure, spinners and weavers could largely protect themselves by buying their raw material only as they sold their goods, but I do not need to tell you gentlemen how difficult it would be to operate at all times on that basis. Those of you who are located at a distance from sources of supply could not keep hedged stocks of the raw material on hand in times of slow yarn and cloth markets, to put you in a position to meet a sudden demand for quick deliveries of your product. You would have to run your plants by fits and starts as yarn and cloth buyers came in or withdrew from the market.

It is common knowledge that cotton shippers operating on a hedged basis consider that they do extremely well if they average a net profit of one-fifth of a cent a pound or $1 a bale, but such a margin would be simply out of the question if they had to operate unhedged and thereby assume the risks of price fluctuations of many times that amount. Merchants would find that whereas they can borrow up to perhaps 80 or 85 per cent. on hedged holdings, they could not borrow more than about 60 per cent. on unhedged cotton, with the result that a given shipper with a given amount of capital could not handle more than a small percentage of the number of bales which he handles at the present time. This would result in the cost of merchandizing the world's cotton crop being greatly more per bale than it is now, with merchants being able to protect themselves against price risks by hedges on the futures exchanges. The risk of losses to merchants and spinners would be incalculably greater than at the present time. During these past few years of difficult business conditions, many spinners and merchants have been forced out of the running, but I leave it to you to visualize how many more would have been forced to the wall if they had had to take the losses involved in the decline of cotton from 20 cents to 5 cents.

During the past few years, great attention has been paid to merchandizing costs, and the belief has been held that in many lines of business there is an unnecessarily wide spread between the prices received by producers of raw materials and those paid by consumers for manufactured products. It is precisely in solving this problem that the futures exchanges render the greatest service to the cotton trade and to society at large. It is unquestionably a fact that the spread between the prices which cotton growers get for their crops and the prices which the general public pays for cotton goods is much narrower than it would be if merchants and spinners were not able to eliminate price risks in handling cotton through the futures exchanges, either by direct hedging or by buying their raw material "on call." So long as weather conditions vary from day to day, from month to month, and from season to season, and the yield of cotton per acre ranges from 125 to 200 lbs., and so long as world demand for cotton goods is subject to violent fluctuations, it will be impossible for the world's cotton crops to be distributed without terrific speculative risks, and if merchants and spinners had to assume these risks they would have to require margins which compensated for them. The only way yet discovered by which this can be avoided is by the system of futures trading, whereby merchants and spinners can offset buying risks against selling risks or can transfer them to speculators and investors who will assume the chance of loss because of the chance of profit.

Futures trading has risen to its commanding place in world commerce because it renders a highly valuable service to society. It helps to assure fair prices to buyers and sellers. It contributes to a smooth flow of industry and a smooth operation of industrial plants. It permits business to be conducted with less risk of loss. It enables small business men with limited capital to handle a much larger volume than they could otherwise. It results in higher prices to producers of raw materials and lower prices to consumers of manufactured goods. Surely, an institution which does this is one of the great servants of mankind.

The Effect of Futures Trading upon the Cotton and the Cotton Yarn Market.

Paper presented by Mr. NORMAN L. CAPPEL, PRESIDENT OF THE LIVERPOOL COTTON ASSOCIATION, at the International Cotton Congress, Prague, 1933.

IN submitting this paper, which is written with the purpose of showing to the spinning industry the necessity of Cotton Futures Markets and the effects which they have on the cotton and cotton yarn markets, it is in the first place desirable to explain what is meant by a "futures market" and what essentials are necessary before one can be brought into existence.

A market must be a well-established place where buyers and sellers can be sure of meeting one another and where they can publicly make known the prices at which they are prepared either to buy or sell. Moreover, arrangements must be made by which the prices at which transactions have been effected are recorded and posted on a notice board in order that those interested in trading in a commodity may know the current values and be in the closest contact.

To establish such a market in any particular commodity it is necessary that rapid communication should exist between all parts of the world in order that everyone interested may be kept informed of the latest fluctuations in prices. It should also be noted that a "futures" market cannot be established for any form of commodity, but only for something which is durable and the value of which is such, in relation to its weight or bulk, that it can be moved over long distances from one market to another without undue loss owing to the cost of transport. Moreover it must be capable of being easily sampled and graded so that it can be described in a manner which is readily understood by all conducting business in connection with it, even though they may not actually have seen it.

Cotton fully satisfies all these requirements, with the result that in the course of time the most highly organized markets have been established and in fact the method which has grown up of establishing world prices has given a lead to the formation of Futures Markets for many other world products.

To understand the reasons for the necessity of a Cotton Futures Market, it must be appreciated that cotton is a seasonal crop which can only be harvested during a short period of the year and which, during its growth, is subjected to weather variations, attacks of insects and other hazards which affect its growth both as regards quality and quantity, with the result that from time to time wide fluctuations take place in price. In addition, a considerable time elapses between the growing, merchanting and the manufacture of cotton goods;

therefore during this interval it is important that all concerned should have some method by which they can insure against these fluctuations and it is by the use of the cotton futures contract that such safeguard can be effected

The actual date when trading commenced in futures is rather vague but this system of trading developed gradually during the growth of rapid communication throughout the world which the opening paragraphs of this paper have shown to be so essential Before the American Civil War the largest proportion of the cotton was shipped in sailing vessels These ships went to the Southern States about the end of the summer each year and waited at the various ports until they could obtain a full cargo often remaining in port for a number of weeks The information with regard to the existing prices of cotton was at that time sent to Europe by mail in sailing ships so that the lack of information and the slow movement of the commodity balanced one another and the position was not so serious as it might seem

Business became general after the Civil War in 1865 with the result that the position gradually altered buying orders were sent out from Liverpool merchants on behalf of their clients who were to a great extent Lancashire spinners before the shipping season for cotton commenced The cotton was still shipped in sailing ships, but the mails moved more rapidly merchants were thus aware of the fluctuations which were taking place in the value of their cotton which might still be held up in sailing ships in southern ports and gradually the risks became unbearable The end of this war coincided with the laying of the Atlantic cable and this more than anything else resulted in a revolution in the methods of trading in cotton Instead of being sold by sample of a specific quality to arrive sales were made on description and contracts were entered into for any grade within certain limits based on middling with stipulated differences for grades above and below that quality In this way the importer was able to buy in America by cabling his offers for Basis Middling and at the same time effect sales in Liverpool without knowing the exact quality of cotton he had bought

In the same way due to improvement in world wide telegraphic communication the spinner in Lancashire found that he also could make rapid communication with his clients thus a demand came from buyers for fulfilment of their requirements for deliveries over longer periods ahead in order however to do this such buyers required some protection in regard to the price of their raw material

Gradually therefore the practice of buying and selling cotton ahead developed and the futures contracts both in Liverpool and New York were evolved enabling merchants and spinners alike to cover or hedge themselves against the risk of market fluctuations during the long periods in which the cotton was in transit

Under the Cotton Futures contract then devised a margin of two months was allowed in the date of delivery as the sailing ship was still in use and the time of arrival therefore uncertain This system of double month delivery became so well established that it was kept in force for many years after the time when steamers carried cotton and in fact only disappeared in Liverpool in 1918 As time has passed, the contract itself has been altered many times, but the basis grade is still middling (equal in colour to the universal standard for American cotton and of not less than fair staple) and no cotton of lower grade than low middling universal standard can be tendered So much for this short outline of the history of futures trading, which shows that from the commencement it was instituted as a protection and insurance against rapid fluctuations in values.

It may be added that until 1902 the quotations for the various months of delivery were made in 64ths of a penny, but at that time the system was improved and facilitated by the introduction of the decimal system. At the present time the Liverpool market is unique, as it has futures contracts for many different growths of cotton ; naturally, however, the contract for American cotton is the most important, but in addition there are separate markets for trading in Upper and Sakellaridis Egyptian and Sudan, another for East Indian and finally for British Empire and other miscellaneous growths. Trading in these markets takes place daily from 10 a.m. until 4 p.m. (Saturdays 10 a.m. until noon) , the quotations recorded are of vital interest to all connected with the cotton trade and telegraphed to all parts of the world, in some cases being distributed by wireless broadcast three or four times each day.

It may be interesting to note some of the uses to which Futures Contracts are put and the facilities they afford to the various sections of the trade.

In the first place, the producer can safeguard himself by selling "futures" against his crop during the summer months before he is able to move his cotton to the local markets ; he should be careful, of course, not to deal in "futures" in excess of his production. In view of the fact that the minimum quantity that can be traded in on the American Cotton Futures Contract is 100 bales, the small farmer has not the same opportunity of hedging, but he can often arrange with a local merchant to buy from him ahead and, by combining small lots which he has purchased, the merchant is enabled to sell a hedge of 100 bales.

The large merchant shipper makes contracts throughout the year, but buys Futures against each fixed price forward contract that he makes. The importer also would find it exceedingly difficult to carry on his business without the use of the futures market and, although by hedging such imports by sales of Futures he limits the profit he can make, he, at the same time, has a sure protection against violent and adverse fluctuations which would have made him run great risks had he been unhedged. In fact, British banks finance the importers of cotton on much more favourable terms if they know the cotton is hedged with Futures than would otherwise be the case.

The special reason for this paper, however, is to convince spinners of the essential importance of being able to use these markets as a form of insurance. Although there are still some spinners who make the statement that they never have any interest in the Futures Market, it must be pointed out that this statement is entirely incorrect, as in reality all spinners are interested in the Futures Market, although they may never actually sign a "Futures" Contract, owing to the fact that in every contract which they make the price is based on "futures" It is well known that the daily enquiry from spinners is to know "how the market stands", by this enquiry the spinner wishes to know the current price of "futures" and when he receives the information he is then in a position to know what contract he is prepared to make, not only for raw cotton but also in connection with his sale of yarn. In this connection it is interesting to note that when the new Cotton Exchange was opened in Liverpool in 1906, the President of the Chamber of Commerce of Manchester said: "The Liverpool Futures Market has been the success of the whole of the trade in Lancashire. Without a Futures Market they could not have existed." During the War this statement was put to the test when the Liverpool Futures Market had to be closed on the outbreak of war in 1914. Urgent demands for re-opening were made by the Lancashire spinners and the trade generally, who contended that they could not carry on their business without this market, and this was finally effected in November 1914. Again, owing to difficulties regarding freight, the market was closed in 1917, but, as the Government realized how important it was that it should continue to function, a special form of emergency contract was actually drafted which could be used for the time being.

The market is used by the spinner for covering himself in the following ways:—

He may have purchased several thousand bales of the particular qualities he usually spins in order to insure his requirements with a view to meeting any demand which may develop; then, at the same time as he fixes the price of his purchase, he also sells an equal amount of "futures" contracts, thus covering himself against the risk of a decline in the price of the raw material before he has been able to sell his yarn. In due course when he makes his yarn contract, he simultaneously buys in his "hedge" in Futures and then, if the price of cotton has declined since the time of his purchase, he makes sufficient profit on his Futures Contract to compensate him for the decline in the value of his cotton, whereas if prices have risen he loses on his Futures Contract, but is compensated by the fact that his cotton was purchased at the lower level In other words, he can carry a stock of raw material and at the same time be relieved of any further anxiety as to fluctuations in its value.

Again, a spinner or weaver who has made contracts for the sale of yarn or cloth for, let us say, a year ahead does not wish to purchase all at once the amount of raw material necessary to complete his contract, as to do so would lock up too much capital, etc. He therefore buys Futures Contracts to cover the weight of cotton or yarn he will require and, as he gradually purchases the necessary grades of actual cotton to meet his requirements, he reduces the amount of his "hedges" accordingly. In this case, if prices have advanced the profit on the Futures Contracts will enable him to buy the higher priced actual cotton, whereas if prices have gone down he loses on his Futures Contracts but is able to purchase the actual cotton at the lower level. In this way he is covered whichever way prices move and thus the value of the futures market is proved, as it enables spinners to book contracts ahead with the minimum of expense and the maximum of security.

In a number of cases, spinners buy their cotton for delivery ahead on " call" terms based on the Futures Market, with the option of fixing the price as and when they sell their yarn. In such cases it is the merchant, who has sold the cotton, who hedges it on behalf of the spinner by selling futures. This method of doing business is used very extensively by spinners and is only made possible by the existence of the futures market.

A further example of the use of this market is in the event of a spinner holding in stock a large amount of manufactured goods and, fearing a decline in values before he can dispose of it, he can insure against such decline by selling Futures Contracts of the equivalent weight of his stock. As the stock is sold the Futures are bought in and a valuable safeguard has thereby been effected during the time the goods have had to be kept in stock.

It will be realized that the price of spot cotton and "futures" varies, *e.g.*, middling " spot " is always higher than middling " futures." The reason is that if middling " futures" is purchased, a variety of grades can be delivered against the contract, allowances being made to buyer or seller according to whether the cotton delivered is inferior or superior to middling. The difference in price between any grade and "futures," or the number of points "on" or "off" Futures at which such grades are quoted compared to Futures, is known as the "basis." The basis varies in accordance with existing conditions governing the supply of and the demand for each grade and staple. At times the basis is dear and at other times cheap and the spinner, who is able to discriminate correctly when he buys his cotton, whether the basis is too dear or too cheap, can often save himself a considerable sum of money.

If, for example, a spinner who requires good middling cotton considers the basis too dear, he will only buy on the "spot" for immediate requirements and, if he has forward sales of yarn, instead of buying cotton "on call" he will go "short" of the basis and buy "futures." These "futures" will be sold when the basis falls to what the spinner considers a reasonable level, when he will cover himself by buying good middling at a fixed price.

If, on the other hand, the spinner considers the basis desirably cheap, then he should go " long" of the basis, either by buying the particular grade or grades he requires "on call" for delivery ahead, or by buying at a fixed price and selling "futures" as a hedge against his purchases. He will fix the price of his cotton or buy in the "futures" as and when he makes his yarn contracts; thus, if in the meantime, the basis has advanced, he will have saved himself the difference. There is no means of insuring against fluctuations in the "basis" or points "on" or "off" and consequently the spinner is compelled to take a view one way or the other, consequently the spinner who studies this problem and makes an intelligent use of the Futures Market in connection with the basis prices as outlined above should get his cotton cheaper in the long run.

So far, therefore, this paper has only outlined methods of using "futures" which are entirely non-speculative, for the purpose of an effective insurance against the risk of market fluctuations or an assistance to the spinner when he buys a specific grade of cotton on call at points on or off Futures It must be remembered however that there are many means of speculation open to the spinner without having any recourse to the Futures Markets and spinners often do in fact speculate either in making purchases at fixed prices for specific grades of cotton before they have made their yarn contracts or in selling yarn ahead without covering themselves by buying cotton It is only by using the Futures Markets and covering themselves that such forms of speculation are avoided

Nevertheless if there is a desire to speculate the Futures Market provides by far the best means because it is possible to liquidate open contracts at any moment and the charges incurred in making a Futures Contract are much lower than speculation in a specific grade of cotton or goods which are more costly to finance

When it is remembered that not only consumers but planters exporters and importers and various other middlemen deal in the Futures Markets repeatedly for covering purposes it will be understood how vast the trading and how widely these markets are used and how close the difference is between buyers and sellers prices Spinners therefore who believe that cotton values are too cheap or too dear and who wish to take an advantage of the price should not hesitate to buy or sell futures in preference to using any other method of speculation

At the same time it must be appreciated that a certain amount of speculation is essential to any Futures Market as such speculators transactions have the effect of equalizing supply and demand and their activities render the fluctuations of price less sudden and abrupt than they would otherwise have been They buy when prices would appear too cheap and sell when they are too dear in this way they help to steady the market and absorb any surplus of contracts or supply contracts when temporarily scarce thus playing a very important and necessary part in the smooth working of the market In other words the speculator performs a legitimate and useful function especially in time of scarcity or over supply At the present time speculation has been largely killed owing to general lack of confidence and Government interference in the commodity markets If for instance the Farm Board in the United States and the Government in Egypt had not taken over large quantities of cotton the low price would have attracted speculative and investment buying from all parts of the world This would have enabled the surplus to be taken care of and as it would have been held in many hands spread over a wide area stability would have been given to prices with the result that the trade would have gained confidence and consumption would have been increased As it is a large supply of cotton held more or less in the control of one hand has hung over the market for years Consumption instead of increasing has steadily decreased consumers buying from hand to mouth owing to lack of confidence and fearing that at any moment large quantities of cotton might be thrown on the market

Of course on various occasions there have been abuses of the futures markets by speculators from outside sources but every exchange is opposed to business of this kind and does everything possible to discourage its members from such business which might result in overtrading. In some cases spinning companies forbid the use of "futures" by their directors and in some countries the Gaming Act can be pleaded successfully by those who enter into futures transactions. It should be pointed out, however, that by forbidding the use of "futures," speculation in values is encouraged rather than avoided. Moreover, all prices of cotton, yarn and cloth are based on the price of "futures," and without active and broad Futures Markets business would be immensely handicapped and made more difficult and complex.

The right to plead the Gaming Act is a matter which has recently received considerable attention, with the hope that those countries in which this can be done will speedily alter their laws to make actions of this kind illegal, it being appreciated that the existing laws were made years before trading in "futures" became so widely recognized and so important. Obviously it is wrong that anyone should have the right to buy or sell Futures Contracts, which have already been proved to be absolutely essential to the cotton trade and, if prices move in his favour, he is permitted to take the profit, whereas if they move against him he pleads the Gaming Act and leaves his broker to bear the loss on his behalf in the Futures Market. Such actions damage the interests of all trading concerns in those countries and make brokers restrict the amount of credit which they are prepared to give to clients, thus causing a serious hindrance to free trading

Geographically, the Liverpool market is the central market of the cotton world, both for the producer and consumer and in this way is an international market. It is extremely highly organized, having articles and rules which govern all forms of trading. There are official forms of contract for trading in "spot" cotton, deferred delivery and c.i.f. cotton and in addition, as already stated, futures contracts in which trading can be effected in the different growths of cotton.

The latter form of contract provides for delivery of cotton to be made within the month specified in the contract and tenders of cotton can be made either on the first or the last day of the month or at noon on any Tuesday or Friday during the month, at the option of the seller. The weight of cotton tendered against a contract for 100 bales of American cotton must not be more than 48,000 lbs. and the buyer is not required to accept any bale weighing more than 672 lbs. gross or less than 300 lbs. gross. A total variation in weight on the whole contract is permitted up to 1,000 lbs.

The cotton tendered must be in warehouse in Liverpool and ready for immediate delivery, in merchantable condition. The buyer must pay for the cotton tendered to him in cash before delivery is made, but it will be noted that the contract is a very precise one, closely defined and regulated and any slight breach of its terms renders the seller liable not only to penalties under the rules, but also to the risk of having the contract invoiced back to him.

The Liverpool Futures Market is singularly immune from big manipulative operations, due to the large stock of cotton which is always held by merchants. In this way it is a safe market in which to hedge and owing to the volume of business which is always being transacted open contracts can be liquidated at the current market values

Taking into account the existing rates of exchange the brokerage in Liverpool charged to persons who are non members is extremely low as compared to the amount charged in other cotton futures markets

It is hoped that this paper which is necessarily short has given some idea to cotton spinners of the value of the Futures Contract and how essential its use is to spinners and others connected with the trade in order to assist in the conduct of their business on safe lines

The subject of futures is an absorbing one on which a great deal more could be written if time and space allowed and it is sincerely hoped that any cotton spinners who attend the Spinners Congress to be held in Prague who are doubtful on any particular point will not hesitate to ask questions on this subject when the representatives from the Liverpool Cotton Association will do everything they can to answer them and make the subject as clear as possible

Terms of Payment and of Credits.

THE International Cotton Committee was requested by the International Wool Textile Organization to make a study upon the question of terms of payment and the limitation of credits. A letter requesting information upon these points was circulated to all Associations, and the following replies are given below:—

CZECHO-SLOVAKIA

(ALLGEMEINER DEUTSCHER TEXTILVERBAND)

1. RAW COTTON.

(a) Conditions governing delivery.

American cotton is mostly bought f.o.w. (free on wagon) Bremen/Bremerhafen, sometimes, however, from the American port c.i.f. Bremen/Bremerhafen, or lately c.i.f. Gdingen

With Egyptian cotton delivery is taken direct c.i f. Trieste, otherwise f.o.w. Trieste.

Asiatic and Indian cottons are dealt with principally c.i f Trieste, some Indian c.i.f. Hamburg. Some business is done through intermediaries f.o.w. Bremen, Hamburg, Trieste.

Peruvian and other similar cottons are obtained either direct c.i.f. Hamburg/Bremen or f.o.w. Hamburg/Bremen.

(b) Conditions governing payment.

Raw cotton is mostly paid for by credits on first-class London or New York banks, running for three to six months from the day of delivery to the spinner's agent when the contract is f.o.w. Copy of invoice and receipt for the shipment of cotton in question are attached to the bill. When the contract is c.i.f. a three-months' or a 90-days' sight bill is drawn. In most cases at present the drafts cannot be cancelled.

The purchaser of the cotton must pay the seller interest, stamp duties, etc., for the three-to-six months' period of the bill.

Cotton is also sometimes paid for (c i.f. contracts) by cash against documents on arrival at the port of destination; in the case of c.i.f. contracts, cash on delivery of the goods to the receiving agent of the spinner.

2. GREY AND FINISHED YARNS.

Raw and finished yarns are dealt with inside Czecho-Slovakia according to the conditions laid down by the Association of Czecho-Slovakian Cotton Spinners, which are probably known to you. It may be mentioned here that in this case the invoices fall due (with 2 per cent. cash discount) on the 20th of the month following delivery, or are paid for with a three-months' bill which amounts to the gross amount of the invoice (without discount) plus a surcharge of 2½ per cent of the invoice value The acceptance runs from the 10th of the month following delivery

The export of cotton yarns is generally carried out by cash against documents, with a 2 to 3 per cent discount or by a 30 to 90 days' bill, sometimes also by cash before forwarding the goods One firm mentions that the terms of payment observed by competitors abroad (120 180 days, or even a sight bill of lading) compel the extension of terms of payment

3 COTTON PIECE GOODS

(1) Grey

(a) *Inland*

Payment is due within 30 to 90 days (with 2 per cent. discount), or net, or against a six-months' bill, in rarer cases, and only for large orders, against a nine months' bill, from the last day of the month on the invoice, or from the date of the same Prices are understood to be those for delivery *from* the weaving establishment The rule seems to be, for accredited customers, payment within 30 days from the last day of the month of delivery, with a 2 per cent discount

(b) *Abroad*

A 30-to-60-day period is usual for payment a 120-day period also where the trade is with Austria A large firm which at the moment exports very little, however, explains that formerly the terms were almost exclusively payment within 30 days from the date of the invoice, with 2 per cent cash discount

LATER INFORMATION

Bleached Export

A firm reports that the following conditions are in force for raw and bleached cotton goods for export to Jugo Slavia —120 to 180 days net cash To Austria, six months' acceptances The conditions in the home market vary from 2 per cent in 30 days to six-months' acceptances It is to be regretted, however, that the conditions in the home market make it very difficult for these conditions to be adhered to Customers appear to meet their bills when convenient to them

2 Finished

(a) *Inland*

Discount rates of 3 per cent (30 days), 2 per cent (60 days), with net payment 90 days or delivery against a three months' bill are customary Sometimes 3 per cent after 90 days is given, as are also 5 to 8 months' periods without discount Prices are quoted as at weaving establishment

(b) *Abroad*

For exports to Rumania, Greece, Turkey, Syria, Egypt, delivery is made against documents (3 to 5 per cent discount), to

Palestine, Lithuania and South America by documentary bill having a period of 120 to 180 days Exports to Sweden, Norway Denmark, Finland Switzerland, Germany, Belgium and Holland are made for payment within 30 days (2 per cent discount)

The conditions of payment which were hitherto customary in the export trade cannot be adhered to in many cases owing to the exchange restrictions now in force in territories important to Czecho Slovakia In no case is there any uniformity in the rules governing the export of cotton semi finished and finished goods and the same is the case with internal trade

ENGLAND

YARN EXPORTS *Terms of Payment*

Austria 2½ per cent, 30 days from invoice date

Bulgaria Three months from sight of documents

Czecho-Slovakia 2½ per cent, 30 days from invoice date

Denmark 2½ per cent, 30 days from invoice date or three months' bill at customer's option

Finland Same as Denmark

Germany 2½ per cent, 60 days

Greece Three months from sight of documents

Holland 2½ per cent, 30 days from invoice date or one month at customer's option

Norway Same as Holland

Poland Eight days after receipt of goods

Roumania Net cash against documents or 60 days from invoice date, or three months' bill mutually agreed upon

Sweden 2½ per cent from invoice date Three months' bill

Turkey 2½ per cent cash against documents, net, three months, or sight of draft for four months from invoice date

Yugo Slavia 5 per cent, cash against documents, or 2½ per cent 30 days

Australia Cash against documents, 60/90 days' draft against acceptance

Argentine and Brazil 90 days from sight of draft

Belgium 2½ per cent, 30 days from invoice date

Italy 2 per cent, 45 days, 2½ per cent, 30 days, or three months, net

COTTON CLOTH

Home Markets

4 per cent cash against invoice

2½ per cent, 14 days

1 per cent, 1 month

Export Markets

60 days sight draft with 2½ per cent discount

It should be mentioned in this respect that the currency restrictions are necessarily increased in the length of time the credit is granted

FRANCE

Conditions of Sale relating to Piece Goods

The following conditions apply to all cotton fabrics other than those dyed in the piece, bleached or printed in the piece, sold in France or Algeria

After agreement between seller and purchaser the goods are sold, either —

1 3 per cent for cash (i e, payment in 5 days from the date of invoice, holidays not included), or

2 2 per cent, 30 days from date of invoice or

3 1 per cent, 60 days from date of invoice or

4 Net, 90 days from date of invoice

Fabrics woven from bleached or dyed yarns are sold payable in 30 days month of purchase not included, with a discount of 1½ per cent

In cases where payment has been delayed beyond the 90 days, interest must be paid at a rate which in no case is less than that of the Bank of France (at present 6½ per cent), increased by 1 per cent (that is, at present 7½ per cent)

All invoices are dated from the date on which the goods are ready for despatch, without any carrying forward of the date

Port dues and packing charges are paid by the purchaser

After agreement between the parties the fabrics are sold, price at the shed, or in the shops of the seller, or at such station as serves the factory or the shop

The goods are payable at the address of the seller Payment by bill does not constitute a derogation of this rule

The body competent to settle any disputes arising from the execution of contracts made according to these rules will in all cases be that of the domicile of the seller

Conditions of Payment

Payment is made at the address of the spinner, *net, without discount*, at the end of the month of delivery, by cheque, transfer or bankable paper, goods invoiced on the 25th are paid for in the month following Centimes to be paid as a whole

Advances are discounted, according to the number of days, at 1 per cent above the discount rate of the Bank of France

Settlement by accepted bill, by previous consent, including charges and interest for delay calculated as indicated in the above paragraph, does not constitute derogation of the above conditions

In the case of default when the bill matures, if there has in the meantime been an understanding between the parties, interest must be paid at a rate not less than 1 per cent greater than the official rate of the Bank of France If, on the contrary, there has been no understanding arrived at, the seller has the right to suspend all subsequent deliveries He can also claim interest on the amount at the rate of a minimum of 7 per cent

NOTE

The rules of sale for yarns are applicable only to unbleached yarns They have been adopted by the majority of firms manufacturing yarns in France

The rules of sale for piece goods only apply to fabrics in the unbleached condition They are adhered to more generally in the Eastern region and in Alsace, centres where the weavers usually sell their production in the grey state

Both for cotton yarns and for piece goods the conditions of sale of our group are only applicable to transactions on the home market They do not apply to export markets, on which the sellers are free to make whatever terms are suitable to themselves

GERMANY

SOUTH GERMAN COTTON MANUFACTURERS

Conditions of Payment

(*a*) The bill is made out for each consignment The payment terms are 60 days net from bill date

For payments up to the 30th day from bill date, 2 per cent cash discount with interest, to the amount of 2 per cent above the prevailing State Bank discount rate, is granted

After the 30th day no discount is granted, but for payments between the 30th and 60th days an interest of 2 per cent above the prevailing State Bank interest rate is granted

The payment must be made in cash, bank cheque, endorsements or post cheque remittances Cheques for banks are credited after receipt, banking drafts under interest deduction at the prevailing State Bank discount rate, if the discount is possible by the State Bank, otherwise at the prevailing usual bank discount rate under reservation of the receipt

Discount and expenses are charged to the buyer. Cheques on outside places are not accepted as payment.

Own acceptances are not valid as cash payments and exclude, in case of acceptance by the seller, the granting of a cash discount.

(*b*) Deductions for postage, remittances and insurance dues are inadmissable.

(*c*) By complete payment of due bill amounts, the seller is under no obligation for further deliveries. If the buyer is in arrears with a payment which is due, then the seller can demand, after due notice, cash payments for all deliveries of goods in respect of all the outstanding deliveries from all contracts.

(*d*) Until full payment has been made, including all other claims (by payment with check or draft, up to check—and draft redemption), the yarn remains the property of the seller. The buyer up to that point is not entitled, without the consent of the seller, to mortgage the goods to a third party or deliver them over as security.

If the yarn is re-sold by the buyer before payment is made, then the claim of the purchaser is regarded as renounced for payment of the buying prices.

Packing. As packing includes the weight of the cases, paper wrapping is allowed for rail despatch cases in good condition, they are re-accepted by " paid returns " within two months.

The price for the bale packing and the price for the cases, as well as the percentage to be paid for use, will be fixed from time to time by the spinners' associations. Open cases which are used for yarn transport by vehicle locally will be regarded as a loan. The compensation for the use of such cases and for cases not returned after settlement of the contracts will also be fixed by the local spinners' association.

Bale packings will not be returned. The net weight of the package must amount to 4,480 grs., and the gross weight is estimated to weigh 10 English lbs. (4,535 grs.) inclusive of string, lid and paper. Deviation in the weight of the single bundles is allowed up to 3 per cent. above and below, but the whole consignment weighed together must have full weight.

Tubes. Tubes are reckoned as yarn and are not returnable. Tube tare, in the case of three-cylinder yarns, is compensated for, if it is as above, by 2½ per cent. of the net weight. Heavy tubes (rabbit spools) are allowed for against the fixed yarn price, if returned in good condition.

In the case of two-cylinder yarns, the tubes are reckoned as yarn and are not returnable. The price for Kotzer is 3 per cent. higher than for cops.

INDIA.

(BOMBAY MILLOWNERS' ASSOCIATION).

The terms of payment in Bombay for cotton yarn and cloth are:—

Cotton Cloth—	
Grey	3 days.
Bleached and finished ...	5 days.
Cotton Yarn—	
Grey and bleached ..	3 days.

Terms of Payment.

INDIAN MARKET

Kind of Cloth	Discount per cent	Brokerage per cent	Commission	Remarks
English cloth imported :—				
1. Grey	3⅛	—	—	—
2 Bleached, longcloth and mulls	3¾	½	—	Wholesale
3 " "	4¼	½	—	Retail
4. Fancy coloured	4⅝	—	—	Wholesale
5. Fancy, coloured	5⅛	—	—	Retail
6. Woollen	4½	—	—	Wholesale
7. English, woollen	5⅝	—	—	Retail
8 Dhooties	4⅝	½	—	Wholesale
9 Dhooties	4¼	¼	—	Retail

Note.—There is a " sahi " of Rs. 2/- per bale on greys, and Rs. 3 to 4 on others

Payment to be made within seven days; interest to be allowed if payment made earlier

Kind of cloth	Discount per cent.	Brokerage per cent	Commission per cent.	Remarks
Japanese cloth :—				
1. Grey and bleached	1	–	-	
2. Taffetas	4⅜	—	-	
Indian mill-made cloth :—				
Grey	⅛	¼	1	-
Bleached, dyed and fancies ..	¾	¼	2	
Grey dhooties, 32's warp and over	⅛	¼	2	—

Note.—Sahi: Re. 1 per bale subject to bale being more than 200 lbs.; if less, 8 annas per bale.

Payment due within 15 days.

Yarn :—			
All counts, grey, bleached and dyed	—	¼	No Sahi or commission

ITALY

Conditions of Sale regarding Cotton Yarns, compiled by a Special Commission of Spinners, etc., and published in an official text by the Italian Fascist Association of the Cotton Industry in 1928.

Art. 29. Payment to be effected as a rule direct to the address of the sender of the goods.

Art 30 The buyer-seller contracts in the yarn business are usually governed by the clause "Conditions laid down by the Cotton Institute," which gives contractual force to the rules of said Institute as regards terms and methods of payment, discounts, etc In cases where contracts do not embody this clause, or terms of payment are not settled otherwise, the rules of Art 31 apply

Art 31 Interest is computed at the current rate of the day, and in any case at a rate of not less than 6 per cent per annum When contracts do not specify the conditions of payment, it is assumed that payments are to be made in cash, 30 days from the date of the invoice, the discount being 3½ per cent

Conditions of Sale regarding Cotton Grey Cloth, compiled by a Special Commission of the Italian Weaving Industry and embodied in the official text of the Fascist Association of the Italian Cotton Industry in 1930

Art 17 The conditions of payment run from the date of the invoice Invoices bear the date of consignment, which is defined in Art 11 of this text (which reads "By consignment, if not expressly stated otherwise, is implied the date at which the goods are placed at the disposal of the customer in the factory, independently of the possibility of actually making the consignment")

Art 18 The conditions of payment are usually specified in the contract Where not specified, terms are cash 30 days

Art 19 Any discounts contained in the invoices refer to the conditions of payment, and do not form part of the price, but constitute a premium or bonus conditional on punctuality of payment Delay in payment deprives the buyer of such discounts Such deprivation can be avoided if payment is made within five days from maturity

Art 20 In the case of retarded payment the debtor must pay interest usually at the rate which is current, or, if the seller so chooses, at a rate exceeding the official rate of the Bank of Italy by 1 per cent

Art 21 In the case of a sale against acceptance, the purchaser must restore the bill, duly accepted, within 10 days of receipt

Conditions of Sale of Bleached, Dyed and Printed Goods, according to the 1920 text

Art 13 Payments are made direct to the seller

Art 14 Unless expressly authorized, these are the conditions of payment —

Cash in 30 days from the date of the invoice

Payment in cash, without deduction of any discount

Interest for delay at the current bank rate, and in any case at a rate of not less than 6 per cent per annum

Any bills which the creditor may be disposed to take in payment will be discounted at the current bank rate, or, at a rate greater by 1 per cent. than the current official rate of the Bank of Italy, and the debtor is debited with the charges made for encashment.

Art. 15. The debtor who does not make payment within 10 days of maturity, besides having to pay interest for the delay, incurs the loss of any discounts to which he was entitled.

Conditions of Sale and Payments for Cotton and Mixture Fabrics at Home and in the Colonies (agreement signed May 31, 1932, at Milan).

Art. 1. Every contract of sale concerning piece goods entered into by firms represented in the F.S.F. dell.I., C.I. and the Ass. It. Fasc. degli Ind. Cot. must indicate the quantity, type and quality of the goods and the actual price.

The following are absolutely forbidden: Deposit accounts in any shape or form, sales with no specification as to the price, or against reference, the adjournment of prices, and the rendering of goods at the end of the season.

Art. 2 Every contract must state the cash discount, the delivery date and the maximum delay fixed for payment, saying besides if this is to be made in cash, against acceptance, or against draft. In the case of payment against acceptance the seller must attach to the invoice the bill requiring return with the signature of the purchaser within the time fixed by the contract, and in any case within 30 days.

In the case of payment against draft, this has to be previously authorized in the contract.

Art. 3. The invoice must not carry a date later than the day of consignment of the goods or before the day on which the goods themselves are ready packed at the disposal of the client.

Art. 4. It is allowed to group invoices from every 10 days and to give them as expiring from the 10th, 20th or last day of the month.

Art. 5. From the date of the invoice, or from that of the group, or from expiry according to Arts. 3 and 4, there must not be a delay of more than 120 days open, or 180 days against acceptance or authorized draft (for bleached and coloured goods) and 90 days and 120 days respectively for grey goods.

Art. 7. All goods free factory.

Art. 8. Gives the amount of the interest.

Art. 10. It is not permissible to delay payment, save in exceptional cases where strict adherence is not insisted on by the seller. He may then grant a delay. When the requested delay does not go beyond four months from the date of the invoice for bleached and coloured goods, and three months for grey goods, it may be allowed, otherwise the delay may be granted against acceptance or authorized draft. In any case, the client bears the charges for interest at a rate greater by 2 per cent. per annum than the current official rate. The client bears the charges for interest.

In no case can payment be prorogued for a longer period than two months, and must not exceed together with the preceding arrears, the maximum fixed in Art 5, i e , 180 days from the date of invoice for bleached and coloured goods, and 120 days for greys, except in certain cases

NORWAY

(De Norske Bomuldsvarefabrikers Forening)

The Sales Conditions for Cotton Goods are in Norway chiefly cash 30 days after date of invoice or immediate cash on receipt of goods In certain cases a credit of three months is allowed However efforts are made with a view to reducing the credits as much as possible

SWITZERLAND

(Schweizerischer Spinner Zwirner und Weber - Verein)

Raw Cotton—

American	90 days sight or cash against documents
Egyptian	Three months' bank re-imbursement

Yarns	4 per cent , 30 days
Piece Goods	2 per cent , 30 days
Fine Piece Goods	3 per cent end of month

The Protection of Spinners from Financial Losses due to Failure of Cotton Exporters.

Prepared on behalf of the DE NORSKE BOMULDSVARE FABRIKERS FORENING (Norwegian Cotton Mills Association) by Mr GABR HOIGAARD President, for the International Cotton Congress, Prague and Carlsbad 1933

IT will have occurred to all spinners that they are entirely in the hands of the cotton exporter. He ships what he likes and if he for some special reason finds advantage in shipping under weight—bad staple—or low grade the spinner has no means or power to control or sample the cotton before it is paid for and delivered.

Under ordinary circumstances a well known and reliable cotton shipper will not risk losing his customers—but if he sees that bankruptcy is near, then the temptation is too great—and he will refuse to compensate the spinner whatever should be the verdict of the Arbitration Board.

Cases are known of shippers who have operated with perfect honesty for a certain period, then they suddenly "play the trick" on their customers, and disappear.

The writer has been the victim of such cases—as mentioned below—and the Arbitration Board could of course do no more than give us an "allowance," which we never received. The case was so bad that it ought to have been put before a criminal court, but was dropped because it would have been necessary for us to have been personally represented in the Court in America.

It is quite obvious that under the present economical conditions many shippers will be tempted in the way described. The writer, therefore, some time ago wrote to the Secretary of the Norwegian Association asking whether anything had been done to protect the spinners in such cases—or if the matter had ever been discussed. This not being the case, it would be interesting to hear the opinion of the members.

Compared with other trades, it must be said that the buyer is expected to trust the seller to an unreasonable extent, and the best way to safeguard the spinner would be by introducing the practice that no cash should be paid the seller before the buyer has sampled and weighed the cotton, and the Board of Arbitrators, if necessary, had given their verdict.

It is possible that this practice is difficult to put into force, on account of the banks If, however, the money was in the hands of the banks, but not allowed to be handed to the seller before the official landing weight and the verdict of the Arbitration Court had been made, then there should be no serious difficulty connected with the banking problem If for some special reason the bank should desire to advance the money, then the bank would have to sample the cotton and see the official weight certificates before the cotton was shipped, and then act on their own risk

The Congress is invited to pass a resolution to be sent to the American Cotton Shippers' Association asking them to put such a practice into force If this does not give a satisfactory result there is still another practice which would certainly help the spinner This is to include more details in the bill of lading, in such a way that the bank is forced to see to it that the invoice and documents are written out for the correct grade, staple and quality This procedure has been opposed by the banks in the past, presumably because it makes the banks more responsible—and it was argued that it would not stop a shipper from falsely invoicing his cotton The writer does not agree, it being quite obvious that a shipper will think twice before he deliberately writes out false documents and presents them to the bank

If it should prove impossible to obtain a satisfactory solution of this problem, then the spinners must look elsewhere for their economic protection It would be of interest to hear what a first-class insurance company would charge for covering the spinners' risks If most of the spinners in Europe joined in the scheme the premium would be very low and the arrangement a paying proposition

Whatever procedure one should follow, it would be of great support if the members would report to the General Secretary of the International Cotton Federation all cases of financial losses they have had on account of failure of cotton exporters

The following are a few examples of losses experienced by Norwegian firms —

(1) Invoice, dated March 1, 1924, for 100 bales Underweight 1,879 lbs , at a value of $629 47

(2) Invoice, dated February 28, 1925, for 100 bales Underweight 8,577 lbs , at a value of $1,919 53

Through arbitration, the spinner was allowed a remuneration of 4d for 46,179 lbs = £769 13s

The shipper in this case cheated the spinner both on the weight and on the quality, the cotton delivered being quite unusable Also a Swedish mill co-operating with the above-mentioned spinner, had a loss of $10,000 on 500 bales delivered from the same shipper The shipper was condemned to pay the above amount, with the addition of interest and solicitor's fees However, it has proved impossible to obtain the money from the insolvent firm

(3) Invoice, dated February 20 and March 12, 1925, for 100 bales Underweight 1,697 lbs , amounting to $411 52

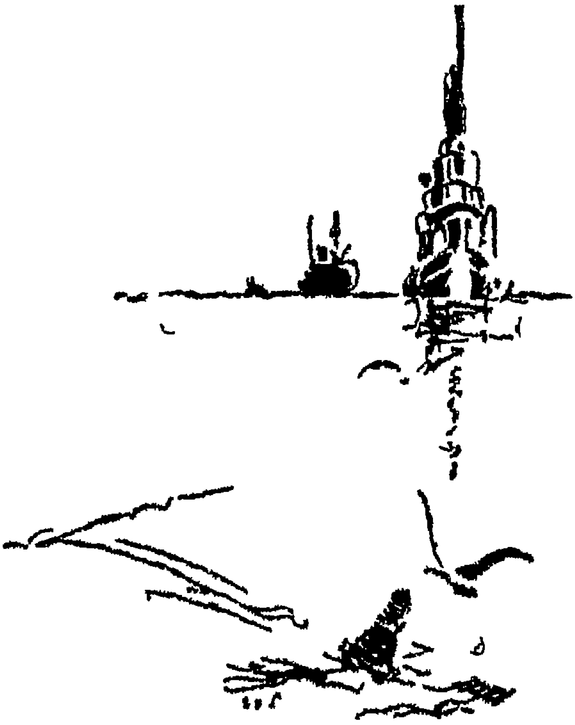
(4) Invoice, dated April 1, 1932, for 50 bales Underweight 1,257 lbs , amounting to $91 13

(5) Invoice, dated April 4, 1932, for 50 bales Underweight 872 lbs , amounting to $62 35

(6) Invoice, dated April 7, 1932, for 50 bales Underweight 656 lbs , amounting to $47 23

(7) Invoice, dated June 2, 1932, for 100 bales Underweight 1,152 lbs , amounting to $82 37

(8) Invoice, dated June 25, 1932, for 100 bales Allowance through arbitration, £26 3s 1d



The Effect of Futures Market on the Cotton Industry

By Herr H WESTERSCHULTE, Bremen, Member of the International Chamber of Commerce, Paris on the occasion of the Congress of the International Federation of Master Cotton Spinners' and Manufacturers' Associations on the 7th to the 10th June, in Prague

SOME years ago the International Chamber of Commerce surveyed the legal position and law court decisions in various countries on Futures and gambling The result was the decision thoroughly to investigate the importance, functions, and also the legal situation of Futures business in commodities This led up to the passing of a resolution at the Sixth Congress of the International Chamber of Commerce at Washington in 1931, in which the Chamber, as the outcome of its investigations, fully agreed with the utility and necessity of Futures Markets, and considered that trading in Futures should be legalized It greeted with enthusiasm the active assistance of the principal Futures Markets of the world in the work of the Committee, and approved of the report which had been laid before the Congress on the rôle of the Futures Markets and their legal position

When so important a body as the International Chamber of Committee considers it necessary to take up the question of Futures Markets for commodities and the business transacted on them, surely it will be of great value to the members of the International Federation of Master Cotton Spinners' and Manufacturers Associations to learn something of the principles and significance of Futures business with special reference to the Cotton Futures Market, although it can hardly be avoided that certain points will be touched upon which are already known to readers or to those present

We shall first, in a few words, try to refute the idea that Futures Markets in commodities are detrimental rather than useful, in their effects, a view which obtains very wide credence With this object we have first to establish, in spite of the erroneous opinion often put forward to the contrary, that a Futures Contract is not merely a paper contract but a bargain for the delivery of goods stipulated not only must the goods be ready for delivery during the delivery period, but they must also be taken over by the purchaser unless the transaction has been previously closed out or a transfer taken place In actuality, more Futures Contracts are filled by delivery than outsiders think To be sure, as regards quality the upper and lower limits which it is permissible to deliver are less accurately specified than in Spot or C I F contracts, which contain exactly described qualities needed for certain purposes In Futures business the limits must be drawn in a fashion which permit the seller to avail himself of the possibility of making sure of the goods for completing the contract out of a variety of grades of raw material, but, on the other hand, the limits must be narrow enough to protect the purchaser from having to take useless goods These are the essential requirements of a Futures Market The payment of differences in value, unfortunately so often censured, which are called for in "Futures transactions owing to market fluctuations caused by market reports crop estimates etc , which must be paid daily or weekly through a Clearing House, gives Futures Markets an especially sound character For this reason wild and financially unsound speculations find here a barrier erected against them since in the case of non-payment there follows straightway a forcible closing of the contracts open in the Futures Market Thus, the risk is as limited as possible for all parties, quite the opposite to the case with long term delivery contracts for goods of a definitely specified grade or quality where both parties must wait for a long period during which there may be heavy market fluctuations without knowing whether the counter party will be able to fulfil his contractual obligations or not Do not be led away by the word "differences" or the phrase "business in differences," to form false conclusions about the value of Futures business but let us think of the obvious and great advantages which Futures Markets allow I myself, as explained at the beginning will content myself by limiting my remarks to the individuals composing this Congress and to the functions of the Cotton Futures Market

In times of good trade it happens only too often that the industry, e g , must make purchases of cotton in the spring for delivery in the autumn against sales of yarn and cloth, that is to say, at a time when the sowing for the crop out of which these delivery obligations will have to be fulfilled has not even been started These requirements of the Cotton trade could not be carried out in a safe manner if the resources of the Futures Market were not available, for it alone gives rise to the possibility of covering at a time when the producer or farmer, apart from exceptions, thinks as little as our own farmers do of selling his crop before he has even sown it In order to draw a practical application, the Cotton Futures Markets make it possible for the industry to make sure of active business a long way ahead, without forcing the seller of the cotton to make short sales of cotton, thus providing an especial measure of security

Contrary to what is often thought, it is not the cotton exporter or importer alone who benefits from the "Futures" Market, but also during the manufacture and in the wholesale cloth trade, the

Futures Markets offer the possibility of protection against price fluctuations. These are the transactions known as hedge transactions, which are possible to-day in all stages of the manufacture of an article. Especially for the industry in which, from the moment of spinning the raw Cotton to the time when the article is finished, a considerable period of time can frequently intervene, great risks are run in the form of market fluctuations. I remember in this connection a certain time in the year 1926 for example, when in Bremen middling 28 mm. spot on September 1 cost over 21½ cents, and on October 8 of the same year, only a few weeks later, round about 14¼ cents. In the reverse fashion it went from about 17¾ cents in the middle of June, 1927, to about 24¾ cents at the end of August that year. The great fluctuations of the summer and autumn of last year are still in everyone's memory. Unfortunately, all branches have not used the Futures Markets to the fullest extent, but have drawn conclusions with an incomplete knowledge of the economy and necessity of Futures Markets. Unfortunately, they have therefore not escaped considerable losses in the recent course of business affairs. I admit at the start that the Spot prices for cotton, as well as for yarn and cloth, do not always run concurrently with the ups and downs of the cotton market. This risk, known as "Basis" or 'Ons' in the cotton trade, and also the risk of the "spinning and weaving margins," cannot always be covered by the Futures Market. But it is just these latter risks, although rather great, that are insignificant in comparison to the fluctuations of the Cotton Market itself, and if the risks of the "ons" and of the "spinning and weaving margins" are sufficient to be classed as important, then it is in my view not only a necessity, but a duty of every manufacturer to ensure against the still greater risk of market fluctuations, i.e., to hold his unsold stock "hedged" on the Futures Market, or, in case he cannot secure his requirements by purchases ahead, he should take security measures in the Futures Market.

One hears so often nowadays the objection that in pre-war days the manufacturers did business for the most part without Futures Markets. This view cannot be maintained if a comparison be drawn between the fluctuations of pre-war days and with those of to-day. Formerly, with prices at 12 cents, a daily fluctuation of ¼ cent was very unusual, whilst to-day with cotton at 6 cents such fluctuations are quite commonplace. The earlier fluctuations could perhaps be bridged over by intermediate profits, but how can this be done nowadays when cotton manufacturers, when buying cotton, have to reckon not only with ¼ cent, but often with cent fluctuations. Is it expedient, and does it maintain calculations, to say that price fluctuations are not excessive? They are, and can only be countered by a covering of the risk on the Futures Market. In close connection with, and of great significance with regard to the balancing of prices between the various markets, are the straddles, which prevent a position from being manipulated one-sidedly, as is possible in markets where there is no opportunity of Future trading.

Having examined the economic significance of the Futures

Markets in commodities, I will now indicate a factor in relation with these which is of great importance I refer to the conception of the "speculator" The view is unfortunately widely held to-day that Futures Markets only attract speculation in the unfavourable sense of the word, that is in the sense of "gambling" It must be appreciated, however, that the speculator takes on, in the market, a part of the risk which another person, it may be the Cotton dealer or the Cotton manufacturer, will not undertake There remains the question whether, in view of this definition of the word "speculation," it is justifiable that in various countries this word is still used with an unfavourable meaning I must deny that speculation is harmful with all possible decisiveness, for the risk which the speculator undertakes for a third party must be taken on by the latter if the speculator be eliminated The risk of the speculator on the Futures Market is considerably more limited than the risk undertaken by an importer, manufacturer or merchant interested in an article, when no Futures Market is at his disposal, since the latter must first wait until he can find a counter-party in order to close out his longs or cover his shorts, whereas the speculator, if he wishes to close out, can find his counter-party at any time, owing to the fact that a Futures Market such as the Cotton Futures Market is a broad market I would refer in this respect to the risks on tobacco as well as on wool, before there were Futures Markets for the latter commodity The intervention of the speculator is comparable with an insurance transaction, e g , against a fire risk, where the insurer or risk-bearer corresponds with the speculator We have only to have the courage to look at things clearly, and we shall find that the speculator, by taking over the risk, serves not only as a regulator of demand and supply, but is even absolutely necessary From another point of view too, it would not do to be without the speculator, else the market would be too one-sided Suppose it happened that the industry, or the cloth merchants, bought extensively in anticipation of high prices The consequence would be that right down to the Cotton grower everyone would have to cover himself against his sales, so that if a buying movement commenced in the market in which actually, at the moment, there was not an adequate supply of the respective commodity, the covering of these orders could only result in a strongly rising market The speculator steps in here and helps to provide a broad market, since he is always ready to buy when prices fall, or, in the case of excessive rises, to sell

Naturally, one could speak for hours on this subject, and could illustrate by many examples I have made it my task, however, very briefly, to give a sketch of the importance of the Futures Markets in commodities, with special reference to the Cotton Futures Market, and I hope in the foregoing to have brought forward proof of the fact that Futures trading is necessary for the growth and well-being of the Cotton industry

The verdict of the International Chamber of Commerce, that it is dangerous for any doubt or uncertainty to exist about the legality of Futures transactions entered into at any of the various Futures Exchanges, is thus of the greatest importance for the Cotton industry since it is for the Cotton industry s good I have at the beginning of this address made mention of the resolution taken at the Sixth Congress of the International Chamber of Commerce in Washington in which resolution the Futures Trading Committee was urged amongst other things

1 To work for the freeing of the Futures Markets of certain countries from legal fetters still encumbering them

2 To follow up all improvements which have been or could be made in Futures Markets

I therefore beg you now in the name of the International Chamber of Commerce to support by the widest publicity amongst yourselves these well meant efforts which will be to the benefit of the industry and I know you will have the thanks of the International Chamber of Commerce for every assistance you are able to give in this direction Help us to reach the goal we are aiming at in this matter in order that the Cotton trade may be kept up to date and be in line with the developments of modern times

Bremen April 29 1933

AUSTRIA.

During the past months, conditions in the spinning establishments have not improved, and only about 54 per cent of the normal capacity has been utilized and the fact that, in addition, some 20 per cent of existing spindles has been stopped must also be taken into account This unfavourable situation is to be traced to abstention on the part of home consumers almost exclusively, since the exports of yarns in the first four months of the current year have shown an increase of 6,689 q (from 9,478 to 16,167 q) It seems that the increase was due to sporadic business and that it is not likely to be repeated, and a decrease in export figures is likely to come about in the next few months

As regards cotton weaving, activity in the various establishments has increased slightly in the past three months, and the degree of employment can be put at some 60 per cent of capacity, working one shift Imports of cotton yarns also declined in the past four months, as seen from the following official statistics —

	1932	1933
Raw cotton	10 879	5 989
Bleached fabrics	1 762	605
Dyed fabrics	1 420	476
Printed fabrics	631	342
Coloured cottons	2 723	1 048
Total	17 318	8 460

However although imports in the first three months of the year have declined 50 per cent , as compared with the previous year, the position of the weaving establishments has remained unsatisfactory This applied especially to prices which, having regard to the sharp competition existing between weavers, have not enabled employers to cover costs of production This is especially the case with the grey goods and staple articles

The outlook is unfavourable both for weavers and spinners, as no signs of increased consumption of woven goods are evident

As regards wages, slight reductions were made in a section of the trade as regards day wages, although the official piece rates were maintained The extent of these reductions, however, amounts to no more than 4 to 5 per cent of the total wages paid

The following is the original report in German —

Die Beschaftigungslage der Spinnereien hat sich wahrend der letzten Monate nicht gebessert und ermoglicht eine zka 54%ige Ausnutzung der normalen Kapazitat, wobei jedoch zu berucksichtigen ist, dass ausserdem zka 20% der vorhandenen Spindeln stillgelegt sind. Diese ungunstige Absatzlage ist so gut wie ausschliesslich auf das Versagen des Inlandskonsums zuruckzufuhren, da der Garnexport in der ersten 4 Monaten des laufenden Jahres eine Steigerung von 9 478 q auf 16 167 q erfahren hat. Allerdings hat es sich hier um Zufallsgeschafte gehandelt, mit deren Wiederkehr nicht zu rechnen ist, sodass die Exportziffern in den kommenden Monaten voraussichtlich eine fallende Tendenz aufweisen werden.

Baumwollweberei. Der Beschaftigungsgrad der Betriebe hat sich in den letzten drei Monaten um wenige Prozente gehoben und die dermalige Produktion durfte mit 60% der normalen Kapazitat bei einschichtigem Betriebe zu veranschlagen sein. — Die Einfuhr von Baumwollgeweben war auch in den ersten 4 Monaten des laufenden Jahres rucklaufig, was aus den folgenden Ziffern der amtlichen Importstatistik zu ersehen ist:

	1932	1933
Rohe Baumwolle	10 879	5 989
Gebleichte Gewebe	1 762	605
Gefarbte Gewebe	1 420	476
Bedruckte Gewebe	534	342
Buntgewebte Gewebe	2 723	1 048
Zusammen	17 318	8 460

Obwohl somit der Import im ersten Drittel des Jahres gegenuber dem Vorjahre um 50% zuruckgegangen ist, ist die Beschaftigungslage der Webereien eine unbefriedigende geblieben. In noch hoherem Grade aber gilt dies fur die Preisbildung, die in Hinblick auf die verscharfte Konkurrenz der Webereien untereinander die Deckung der Selbstkosten, namentlich bei den rohen Geweben und Stapelartikeln unmoglich macht.

Die Aussichten fur die weitere Geschaftsentwicklung sind sowohl in der Spinnerei, wie in der Weberei ungunstige, weil keine Anzeichen fur eine Wiederbelebung des Gewebeverbrauches vorliegen.

Was die Arbeiterlohne betrifft, so wurden in einem Teil der Betriebe Ermassigungen der Akkordsatze unter Aufrechterhaltung der tarifmassigen Stundenlohne durchgefuhrt. Das Ausmass dieser Lohnkurzungen durfte aber 4-5% der gesamten Lohnsumme nicht erreichen.

BELGIUM.

During the last two months the rise in the price of cotton, due in part to the devalorization of the dollar, brought about a slight improvement in the cotton market. It appears, however, that a large part of the buyers treated the rise as though it were only temporary.

Nevertheless, the rise in prices of yarns has been relatively

less than the rise in price of the raw cotton and it still remains unfavourable. Certain manufacturers have increased their activity.

Owing to the fluctuations in the cost of living, the cotton industrialists have cancelled last May the increase in wages of 2½ per cent which was granted to the operatives in November, 1932.

The following is the original report in French —

Au cours des derniers mois, la hausse des cours du coton — compensée d'ailleurs en partie par la dévalorisation du dollar — a donné une légère impulsion au marché des produits cotonniers. Il semble cependant que la plus grande partie de la clientèle se méfie de la hausse des cours et soit portée à croire que celle-ci est passagère.

Quoiqu'il en soit, la hausse des prix des filés est relativement moins importante que celle des prix du coton brut; ils restent nettement défavorables.

Certains tisseurs ont pu enregistrer quelque amélioration de leur activité.

Les fluctuations du coût de la vie ont amené les industriels cotonniers à supprimer, en mai dernier, l'augmentation de salaires de 2 5% environ accordée aux ouvriers en novembre 1932.

(*Association Cotonnière de Belgique.*)

CHINA.

Cotton mills in Shanghai operated at about 70 per cent of capacity during April and early May, but activity increased during the latter part of May and early June to from 80 to 85 per cent of capacity, according to local trade reports. The Shanghai yarn market was reported generally dull with stocks increasing, while the piece goods market was reported quiet on the whole with stocks of goods light. It is said that the tariff revision has stimulated the market for native goods to some extent.

Activity of cotton mills at Hankow was reduced to five days a week. In Tientsin one mill was reported closed and the rest working full time, while the mills at Tsingtao put into effect a 15 per cent curtailment beginning May 21. It is said that some mills at Tientsin were making sales at unprofitable prices owing to their need for cash.

(*United States Department of Commerce.*)

ENGLAND.

The position of the cotton industry shows little change compared with three months ago. Approximately spindles have been working at 70 per cent and looms at 65 per cent of normal capacity at mills and sheds which are operating. Many spinning and weaving establishments are, however, indefinitely stopped.

FRANCE.

During the second half of the month of May and during the first few days in June there was a slight improvement in demand but this improvement which is seasonal, has not been continued Prices of yarns and cloths have not followed the increase in price of the raw material and remain very poor especially in the fine-spinning and weaving sections

At the end of the month of May the activity in the cotton textile industry was calculated to be on an average about 72 75 per cent of full capacity, taking into account those establishments completely stopped

There has been no alteration in the wages during the second quarter

FOREIGN TRADE

	1st Quarter 1933 Metric Quintals
A —Imports	
1 Cotton yarns	1 843
2 Cotton cloth and other manufactured goods	3 660
B —Exports	
1 Cotton yarns total exports	17 512
Destinations	
Algeria French Colonies and Protectorate Countries	3 881
Foreign markets	13 631
2 Cotton Cloth and other manufactured goods Total Exports	105 732
Destinations	
Algeria French Colonies and Protectorate Countries	84 991
Foreign markets	20 741

The original report in French follows —

On a constate dans la seconde partie du mois de mai et au debut du mois de juin une legere reprise de la demande, mais cette pointe qui est d'ailleurs saisonniere ne s'est pas revelee durable Le prix n'ont pas suivi la hausse de la matière première et demeurent très mauvais, en particulier en ce qui concerne le tissage et les files fins

A la fin du mois de mai l'activite des manufactures cotonnieres pouvait être evaluee en moyenne de 72 a 75 pour cent, compte tenu des usines complètement arrêtees

Il ne s'est produit au cours du second trimestre aucune modification de salaires

COMMERCE EXTÉRIEUR

	1er trimestre 1933 Quintaux Metriques
A —Importations	
1 Fils de coton	1 843
2 Tissus de coton et autres articles manufacturés	3,660

COMMERCE EXTÉRIEUR—*continued*

	1er trimestre 1933 Quintaux Métriques
P. Exportations	
1. Filés de coton: exportations totales	17 512
Destinations:	
Algérie, Colonies françaises et pays de protectorat	3 881
Marchés étrangers	13 631
2. Tissus de coton et autres articles manufacturés: exportations totales	105 732
Destinations:	
Algérie, Colonies françaises et pays de protectorat	84 991
Marchés étrangers	20 741

(*Syndicat Général de l'Industrie Cotonnière Française.*)

GERMANY.

SPINNING SECTION.

In the commencement of the second quarter of 1933 a remarkable improvement set in as regards the greater part of the spinning industry. This forward movement progressed during May and the first half of July in no uncertain manner.

In these circumstances, firms were generally more active, extra machinery could also be put into commission in certain cases.

Towards the end of the quarter under review, in certain sections, demand tended to become quieter; the present state of the order books, however, ensures work for the next few weeks, especially as a reduction of yarn stocks has taken place.

It is a general complaint, however, that owing to low-priced offers from foreign quarters, sales are having to be made at unsatisfactory figures.

The original German report follows:—

Mit Beginn des II. Quartals 1933 setzte in einem grösseren Teil der Dreizylinder-Spinnerei eine bemerkenswerte Belebung der Geschäftstätigkeit ein. Diese Belebung machte sich im Verlauf des Monats Mai und bis zur Mitte des Monats Juni nicht unerhebliche Fortschritte.

Unter diesen Umständen konnte der Beschäftigungsgrad der Firmen durchweg gehoben werden, teilweise waren auch Neueinstellungen möglich.

Gegen Ende des Berichtsquartals wurde in einzelnen Bezirken die Nachfrage wieder ruhiger; der gegenwärtige Auftragsbestand sichert jedoch den Betrieben für die nächsten Wochen und Monate im allgemeinen eine ausreichende Beschäftigung, zumal eine Verringerung der Garnlager eingetreten ist.

In allen Berichten wird aber darüber geklagt, dass die Verkaufspreise unter dem Druck der ausländischen Angebote immer noch unbefriedigend sind.

(*Arbeitsausschuss der Deutschen Baumwollspinnerverbände.*)

WEAVING SECTION

The holding back on the part of customers, which lasted until the end of the first quarter of 1933, has happily given place to a strong buying movement during the second quarter of the year Especially during the months of April and May substantial orders were received, which ensured a greater degree of activity in the establishments concerned Towards the end of the second quarter, however, a tendency to withhold orders was again evident, but the present state of order books is satisfactory generally, and assures works of a satisfactory degree of activity during the next few months

Prices for woven goods have not improved, and are still unsatisfactory

---

The following is the original German report —

Die Zuruckhaltung der Abnehmerschaft, die bis Ende des I Quartals 1933 bestanden hat, hat erfreulicher Weise im Verlaufe des II Quartals 1933 einer starkeren Nachfrage Platz gemacht Es konnten insbesondere in den Monaten April und Mai umfangreiche Auftrage hereingenommen werden, die sich eine Verbesserung des Beschaftigungsgrades der einzelnen Werke zur Folge hatten Gegen Ende des II Quartals machte sich wiederum eine Zuruckhaltung in der Erteilung neuer Auftrage bemerkbar Der vorhandene Auftragsbestand ist jedoch im allgemeinen befriedigend und sichert den Werken auch fur die nachsten Monate eine ausreichende Beschaftigung

Die Gewebepreise haben eine kleine Besserung erfahren, sind aber immer noch unbefriedigend

(*Verein Suddeutscher Baumwollindustrieller*)

HOLLAND.

Conditions in the cotton trade have not much improved since the last report

In the spinning-section of the trade the demand for yarns is still unsatisfactory and the competition among spinners is so severe that most transactions are below cost price Many mills are working short time and especially in ringcops the position is very bad

In the weaving section the export demand remains small and the prices quoted are in most cases too high to lead to business Most of the export mills are working short time and a great number of looms are stopped For the home trade the demand has somewhat improved, probably on account of the summer season, and the firmer prices for cotton, but it is far from certain if this will continue

The general condition in the country is still far from satisfactory and so long as the number of unemployed does not decrease materially a permanent improvement in the cotton trade does not seem probable

ITALY.

After the improvement registered from October, 1932, to March, 1933, the situation in the Italian cotton industry has remained stationary during the second quarter of this year.

The slight setback is to be attributed to the monetary situation in America, which has introduced new uncertainty into international commerce.

Prices are still on the weak side. Employment is increasing, whilst wages are firm.

At April 30 exports remained completely stationary as regards the preceding year, a diminution in yarn exports being offset by an increase in exports of piece goods.

	1932	1933
Yarns, Q li .	102,449	93,763
Piece Goods Q li .. .	105,870	119,874
	208,319	213,637

The following is the original Italian version:—

La situazione dei cotonifici italiani, dopo il miglioramento verificatosi da ottobre 1932 a marzo 1933, si è mantenuta stazionaria durante il secondo trimestre di quest' anno.

Il lieve rallentamento è da ritenersi come una conseguenza delle vicende monetarie americane che determinarono nuove incertezze nel commercio internazionale.

I prezzi sono sempre molto fiacchi. L' occupazione operaia è in aumento, mentre i salari sono fermi.

Al 30 aprile le esportazioni rimangono in complesso stazionarie rispetto al 1932 e si nota una diminuzione nei filati compensata da un aumento nei tessuti.

	1932	1933
Filati Q li.	102,449	93,763
Tessuti Q.li.	105,870	119,874
Q li.	208,319	213,637

(*Associazione Italiana Fascista degli Industriali Cotonieri.*)

JAPAN.

Cotton yarn production in April amounted to 257,000 bales compared with 246,000 for March and 240,000 bales for April, 1932. Total production of cotton yarn for the nine months of the cotton season aggregated 2,170,000 bales compared with 2,058,000 bales for the corresponding nine months of 1931-32. Exports of cotton cloth for March amounted to 183,000,000 yds., showing an increase over the exports in February amounting to 157,000,000 yards and over the exports in March, 1932, amounting to 148,000,000 yards.

The law controlling export trade in Japan became effective May 1 Details regarding this law are not available but it is generally known that the Government intends to exert some control over exports of certain commodities as the competition among domestic manufacturers last year and the large exports of some products resulted in unfavourable action by some foreign countries with reference to imports of Japanese goods

(United States Department of Commerce)

PORTUGAL.

Cotton mills continued to operate at capacity during April, and stocks were being kept low by orders from the Provinces and African Colonies Foreign companies trading in the Colonies continue to fill their textile requirements through purchases from Portuguese mills *(U S Department of Commerce)*

SPAIN.

During the second quarter of the present year no social conflicts have arisen to influence the situation, but the degree of production, at the moment, is on a lower scale Although internal consumption has remained stationary, exports have felt the effect of the external situation, especially as regards the currency restrictions imposed by several nations, those of South America being the principal ones This has brought about a diminution of shipments to these places

Thus it is that industry, alarmed lest disequilibrium between production and consumption (sales) might follow, and that this might assume large proportions, called in the Governmental Organizations established to deal with such cases, and succeeded this time in obtaining an answer to their requests The Government has understood how justified were their fears, especially as manufacturers' prices experienced no such rise as was hoped for in relation to those of raw materials

The industrial interests concerned recently instituted negotiations between themselves, in order to seek for a solution with a view to reorganizing production, but definite agreement has not been reached so that we refrain from giving details until we are able to know more as to their scope

(Associacion de Fabricantes de Hilados y Tejidos de Algodón en la Camera, Barcelona)

SWITZERLAND

In consequence of rising cotton prices, demand for yarns and fabrics improved during the course of the second quarter of 1933, but was not sufficient to bring about an equivalent increase in sellers' margins On balance, there was certainly a definite but not universal increase in the amount of orders on hand, although the exceedingly depressed prices for manufactures experienced no improvement to the good of the industry

The degree of activity in the spinning and doubling sections amounted to from 65 to 87 per cent.; in the weaving section it was from 71 to 90 per cent. of normal, the lowest percentages being registered by the fine sections, the highest by the average and coarse sections. Eighty per cent. of the employees worked normally, 20 per cent. were on short time. Wages have not changed since the publication of the last report.

IMPORTS AND EXPORTS IN MARCH, APRIL AND MAY, 1933

	Imports		Exports	
	Amount (q)	Value (Fr)	Amount (q)	Value (Fr)
Yarns	5,315·35	2,304,394	6,611·13	3,081,763
Woven goods .. .	13,444·28	7,524,533	15,295·42	18,478,700
Knitted goods	514·23	790,846	2,138·00	4,649,988
	19,273·86	10,619,773	24,044·55	26,210,451

The original text in German runs as follows:—

Zufolge steigender Baumwollpreise besserte sich im Laufe des II. Quartals 1933 die Nachfrage nach Garnen und Gespinsten, reichte aber nicht aus, um den Rohstoffaufschlag in vollem Umfang dem Käufer zu überbinden. Es resultiert per Saldo wohl eine bescheidene aber nicht durchgehende Erhöhung des Auftragsbestandes, ohne dass die äusserst gedrückten Fabrikatpreise eine Verbesserung zu Gunsten der Industrie erfahren hatten.

Der Beschäftigungsgrad in Spinnerei und Zwirnerei betrug 65 bis 87%, in der Weberei 71 bis 90% der normalen Betriebskapazität, wobei die niedrigsten Prozentsätze auf die feine Sektion, die höheren auf die mittelfeine und grobe Fabrikation entfallen. 80 Prozent der Belegschaft waren normal, 20% bei verkurzter Arbeitszeit beschaftigt.

Die Lohne haben seit der letzten bezüglichen Publikation keine Aenderung erfahren.

IMPORT UND EXPORT IN DEN MONATEN, MÄRZ, APRIL, MAI 1933

	Import		Export	
	Menge (q)	Wert (Fr)	Menge (q)	Wert (Fr)
Garne	5,315·35	2,304,394	6,611·13	3,081,763
Gewebe	13,444·28	7,524,533	15,295·42	18,478,700
Stickereien	514·23	790,846	2,138·00	4,649,988
	19,273·86	10,619,773	24,044·55	26,210,451

(*Schweizerischer Spinner, Zwirner und Weber Verein.*)

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COTTON GROWING

ALGERIA

Cotton sowings were not maintained in 1932 except by some planters in the department of Oran In 1932 only 470 acres were sown (of which 450 were in the department of Oran), as against 4 560 in 1931 and an average of 14,160 for the years 1926 30 Yield has fallen to 860 centals (180 bales) of ginned cotton as against 6 450 (1 350) in 1931, and 27,630 (5 780) on the average for the period 1926 30 It does not seem likely that cotton growing will develop in Algeria as long as the prices obtained are not likely to be remunerative (I I A)

ARGENTINA.

The cotton plantations benefited by the favourable weather prevailing during January and February, but a drought then set in which caused some damage especially to the second late crop It is estimated that the production of unginned cotton amounts to from 1 984,000 centals (415 100 bales) to 2,205,000 centals (461,200 bales), 15-20 per cent lower than last year

The damage done by locusts is very slight There have been several invasions of cotton worms, but, owing to the energetic defensive measures adopted by growers, this has not affected the yield very much, the reduction in the crop being due rather to the excessive dryness (I I A)

AUSTRALIA.

During April ideal weather has prevailed for cotton harvesting in all sections of the Queensland belt, and good progress has been made with the picking of this season's crop Following the general heavy rain which fell at the beginning of April, the cotton now coming to hand at the ginneries is lower in grade, and slightly discoloured as a result of exposure to the air Continuance of the present sunny, dry weather conditions, however, will ensure a high grade for the cotton that is now opening up on the bushes The dewy nights have a tendency to bleach the open cotton in the bolls and improve the colour and the grade

The dispute between growers and pickers in the Biloela district has been settled, the minimum rate to be paid will be 10s per 100 lbs *

---

* The price paid to pickers in U S A is at present 45 50 U S cents per 100 lbs

In the southern cotton-growing areas, the West Moreton, Lockyer and Maranoa districts, the cotton season has been a most disappointing one Heavy falls of rain, followed by three to four weeks of extremely hot, dry weather, have occurred on three occasions throughout the growing season, and these adverse conditions have ruined the chances for good yields Normally, the average production per acre of cotton in this part of the state is high, and above that of the cotton districts generally This year, however, it will probably not be more than half what is usually harvested The Moreton and Lockyer districts comprise the oldest agricultural section of Queensland Lying between the main dividing range and the coast, they form the south eastern corner of the state, and contain a large area of land, which has proved very suitable for cotton-growing The principal cotton growing centres are Marburg, Rosewood, Boonah and Kalbar and the Fassifern Valley, Laidley, Gatton and Helidon, in the Lockyer, and Lowood, Esk and Toogoolawah, in the Brisbane Valley The history of cotton-growing in these areas is the history of the industry in Queensland Wtih suitable varieties of cotton and an assured Australian market for the cotton produced there is no reason why this part of Queensland should not plant a big acreage of cotton, with profitable results to the growers

(*Textile Journal of Australia*)

The following table shows the progress made in cotton growing, which is carried on in Queensland only, during the last ten years for which details are available —

PRODUCTION OF UNGINNED COTTON

	Area under cotton acres	Yield of unginned cotton lb
1921 22	2 805	940 699
1922 23	37 663	4 007 878
1923 24	75 219	12 614 516
1924 25	82 409	16 157 813
1925 26	53 473	19 560 858
1926 27	31 522	9 069 492
1927 28	28 885	7 060 756
1928 29	26 122	12 290 910
1929 30	27 659	8 024 502
1930 31	35 527	17 022 897

Corresponding figures for 1931-32 are not yet available, but it is understood that further increased production will be recorded Substantial development has been made in the industry, the yields per acre showing a gratifying increase Consequently the amount paid out by the Commonwealth Government under the Cotton Bounty Act for seed cotton, and also cotton yarn spun therefrom, has gradually increased to embarrassing figures Of a total of £519,240 paid out during the years 1908 to 1931, £157,933 was distributed in 1931, seed cotton absorbing £100,848 and cotton yarn £57,085 The Government, therefore, by legislative action, abolished the bounty as from July 1, 1932 Tariff modifications on imports of cotton yarn, varying according to counts, were made as a compensatory measure to assist local spinners of yarn

BRAZIL.

Owing to the failure of the crop in the north east zone of Brazil, considerable importance attaches to the production of cotton in the state of São Paulo The classification of the 1932 33 crop began on March 15 last, and up to April 30 gave the following results (comparative figures for the similar period in the preceding year being added) —

Types	Kgs		Percentage	
	1932	1933	1932	1932
1	93 762 6	90 530 5	5 68	1 72
2	318 333 3	605 270 0	19 02	11 51
3	529 814 9	2 024 854 3	31 66	38 51
4	479 292 1	1 906 977 1	28 64	36 27
5 (basic)	186 763 5	555 648 9	11 16	10 57
Other types	65 376 2	74 648 1	3 84	1 42
	1 673 342 6	5 257 928 9	100 00	100 00

The minimum length of fibre registered in the period April 16-29, 1933, was 27 mm , and maximum 29/30 mm

The Agricultural Department of the state of São Paulo has furnished a communique to the press stating that the crop estimate made last February had been modified in view of the lack of rains in March The new estimates are about 25 per cent less than those of February On the other hand, "according to the results of the commercial classifications made by the Merchandise Exchange, the cotton of the present crop is notably superior to that of previous crops "

BRITISH WEST INDIES.

As a result of the continued poor demand for Sea Island cotton, a policy of acreage restriction was followed in most of the islands, and the production for 1932 was only about one third that of 1931, the 1932 crop being estimated at 1,475 bales of 400 lbs , compared with 4,162 bales for 1931 On the other hand, the production of the medium staple (Marie Galante) amounted to 2 214 bales of 400 lbs against 938 bales for 1931 The demand for Sea Island cotton is still on a small scale, and the current prices are said to be much below the cost of production Stocks of Sea Island cotton in the United Kingdom, which are mainly financed by the British Cotton Growing Association, are equal, at the present rate of consumption, to several years' demand

Production of cotton for 1931-32 was as follows in the various islands Grenada, 816,000 lbs St Vincent, 279,000 lbs , Barbados, 73,000 lbs , Montserrat, 187,000 lbs , Antigua, 35,000 lbs Nevis, 24 000 lbs , St Kitts, 35,000 lbs Anguilla, 26,00 lbs *(U S D C)*

BULGARIA.

Official statistics show a heavy decrease in area sown From 19,700 acres in 1932 there has been a fall to 7,900 acres, 40 per cent below the 1927-31 average

The unfavourable weather in May caused very irregular development. Crop condition on June 1 was 130 against 150 at the same date last year. (*I.I.A.*)

CHOSEN.

The area planted in 1932 is estimated at 390,000 acres, including 246,000 acres planted to Upland varieties and 144,000 acres to native varieties, showing a decrease of 75,000 acres for Upland varieties and 6,000 acres for native varieties, according to official figures. The estimated production for 1932 was 135,000 equivalent 500 lb. bales, including 102,000 bales Upland and 33,000 bales native, compared with 102,000 bales, including 72,000 Upland and 30,000 bales native, for 1931. (*U.S.D.C.*)

FRENCH WEST AFRICA.

The 1932-33 crop was compromised in the French Sudan by unfavourable weather; the Allen variety is spreading amongst the natives there. In Haute Volta, the principal producing section of the group, the crop has, due to the low prices, which prevent export, been practically limited to native requirements.

Production in French West Africa as a whole, which exceeded 220,000 centals (46,000 bales) of lint on the average of the five years ending 1927-28, and attained 290,000 centals (60,000 bales) in 1929-30, but fell to about half that figure last year, will very probably not exceed 90,000 centals (20,000 bales) this year. (*I.I.A.*)

HAITI.

The cotton crop of 1932-33 is estimated to be somewhat smaller than that of last year, according to local authorities. It is said that 95 per cent. of the crop was sold out by the end of May. Since May 1 prices of local cotton increased by about 50 per cent. (*U.S.D.C.*)

MEXICO.

Planting of cotton in the Laguna district was reported to be completed at the end of April. The area estimated to be planted in this district is 215,000 acres, which compares with about 116,000 acres harvested in 1932. Little damage was reported to the crop. However, in the Matamoras valley drought is said to have damaged some of the early cotton.

The acreage in Lower California for 1933 is estimated at 54,000 acres against 27,000 acres in 1932. (*U.S.D.C.*)

PERU.

A Peruvian law, dated April 11, 1933, repeals that part of the law of November 3, 1932, affecting cotton export duties, and again puts into force the basic cotton export duty law of March 14, 1928, according to a recent report from Lima Provisions under the law of March 14, 1926, are as follows —

Two British shillings per Spanish quintal (101 lbs) on Mitaffi and soft cotton when the wholesale price f o b port of exportation is 10d per pound When the price is more than 10d, the duty per quintal will be increased by 10 per cent of the excess of the current values above the specified price When cotton is quoted at a price less than 10d per pound the duty will be 10 per cent of the difference between the quoted value per quintal and the cost of production which for this class of cotton is taken to be 40 soles per quintal, f o b Peruvian port

12^1 pence per Spanish quintal on semi rough cotton from Ica, *when the wholesale price f o b port of exportation is 11d per* pound When the price is more than 11d, the duty will be increased by 10 per cent of the excess of the current value above the specified price When the price is less than 11d per pound, the duty will be 10 per cent of the difference between the quoted price per quintal and the cost of production, which for this class is taken to be 45 soles per quintal

12^{1}d per Spanish quintal on cotton from the Department of Piura when the wholesale price f o b port of embarkation is 12d per pound When the price is more than 12d per pound, the duty will be increased by 10 per cent of the excess of the current value above the specified price When the price is less than 12d per pound, the duty will be 10 per cent of the difference between the quoted price per quintal and the cost of production, which for this class is fixed at 50 soles per quintal

All cotton raised in the Cis Andean section of the country is exempt from export duty when shipped from coast ports, but when shipped from river ports it will pay half the export duty established for Mitaffi and soft cotton (*U S D C*)

ST. KITTS-NEVIS

Owing to the continued unsatisfactory condition of the market for Sea Island the area under cultivation in the Presidency has been reduced from 6,000 to 600 acres The crops of all three islands were severely damaged by pink boll worm (*I I A*)

ST. VINCENT.

The area under Sea Island cotton in 1932-33 is now estimated at 669 acres, as against 1,802 in 1931-32, and 3,946, the average for the quinquennium 1926-27 to 1930-31 Percentages 37 2 and 17 0 Area under Marie Galante was the same as that of the previous season 886 acres, as against 1,088 on the average (81 6 per cent)

During the quarter ending March 31, 1933, insect and fungoid pests of Sea Island cotton were normal The percentage of stained cotton was expected to be small At the end of May Sea Island cotton had been uprooted, there was every indication that the area under Sea Island cotton would not be increased during the coming season (*I I A*)

28719/26

SUDAN.

The first official estimate of the 1932-33 cotton crop of the Gezira area in the Anglo-Egyptian Sudan is now placed by the Department of Agriculture and Forests at 82,885 bales of 478 lbs., Of this it is reported 43,205 bales were picked prior to March 1, 1933. In recent years the average yield in the Gezira has been downward Low yields for two successive seasons, 1929-30 and 1930-31 caused considerable anxiety regarding the whole Gezira cotton enterprise The high yield of 1931-32, however, was encouraging and provided evidence that Gezira soil under suitable conditions can produce excellent cotton. Apparently as the area has increased the yield has decreased. Of the Sudan irrigated cotton, the Gezira, which produces Sakellaridis, is the outstanding district.

ACREAGE PRODUCTION, AND AVERAGE YIELD PER ACRE IN THE GEZIRA AREA OF THE ANGLO-EGYPTIAN SUDAN 1912-1933

Year	Area Acres	Production Bales of 478 lbs	Yield per acre lbs
1912	260	276	508
1913	633	634	536
1914	693	526	363
1915	3,076	3,248	505
1916	3,489	2,312	317
1917	4,464	2,950	316
1918	4,001	2,628	314
1919	4,115	2,735	318
1920	3,890	4,052	502
1921	3,852	2,515	312
1922	10,191	7,975	374
1923	10,781	7,877	349
1924	23,351	13,332	273
1925	22,437	9,899	211
1926	83,352	79,703	457
1927	103,859	98,897	455
1928	109,599	72,105	314
1929	136,342	96,596	339
1930	161,611	69,709	202
1931	203,472	55,190	130
1932	201,330	166,817	396
1933	202,374	*82,885	-

* First official estimate

The Department of Agriculture and Forests of the Sudan Government issue the following report of the Sudan cotton crop for May. We attach the figures of last year's crop:—

Variety	Area under Crop Feds	Picked to date Kantars of 315 Rottles	Estimated Total yield Kantars of 315 Rottles	Estimated total yield 1932
Gezira Sakel				
Syndicate	175,792	336,322	375,476	805,051
K C C	19,183	39,154		
Tokar Sakel	40,000	87,619	95,000	52,614
Kassala Sakel	19,147	26,400	27,000	30,614
Dueim Sakel	425	2,096	2,096	1,792
Private Estates Sakel	3,531	8,961	8,961	13,721
Total Sakel	258,078	500,552	508,533	903,792
Irrigated American	11,635	39,569	39,569	43,670
Rain-grown Cotton	43,225	33,584	33,584	46,640

1 Kantar = 312 lbs. seed. cotton

In view of the important decrease in production below that of last year foreshadowed in the above report it is interesting to note the remarks made in this respect in the Empire Cotton Growing Report recently published —

> The season 1932 33 has again been unfavourable Rains in June August and September were again much above the average The heavy August rainfall delayed planting in parts of the area and late sown cotton in the Gezira usually means poor yields and low grades The climatic conditions were favourable to the development of black arm and leaf curl and the importance of volunteer plants brought up by the rain in last year s cotton land as a source of infection of the latter disease in particular was emphasized Heavy shedding also took place and this was partly due to American boll worm which was more in evidence than usual A description by the Director of Agriculture of the conditions prevailing this season and their effect on the crop is given below
>
> Both in the Gash Delta and at Tokar the yields per feddan were better than in the previous year The effective area flooded was however in both places considerably less and the total crop produced showed a decrease
>
> As regards American type cotton the amount grown under irrigation showed a very marked decrease owing to the low prices and for the same reason cotton as a rain grown crop has almost disappeared in the northern areas In Kordofan and the Nuba

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Mountains, on the other hand, though cultivators were warned that the price that could be paid would be less than in the previous year there was little falling off in the demand for seed The crop produced was smaller, however, owing to locusts These destroyed most of the early food crops, which had therefore to be replanted So much of the cultivators' time was taken up in this work that their cotton was neglected, and yields were generally smaller in consequence '

UGANDA.

The total yield of the 1932-33 Uganda cotton crop was placed at 217 573 bales according to the March 1 estimate received from Pretoria, South Africa This is an increase of 20 per cent above last season's crop of 168,400 bales Weather conditions were said to be unusually favourable this season Heavy rains during the picking period in late January and early February lowered in some cases the grade of cotton, it was stated The average staple length of Uganda cotton is roughly 1^{1} ins , while from some areas a cotton of 1_{11} ins is obtained

---

Purchase figures to date give an equivalent, on a 30 per cent ginning basis, of over 280,000 bales of 400 lbs each Final figures will show a slight increase

Buying figures are often a little incomplete, and ginning output is usually a little above 30 per cent The carry-over into 1933 was small on account of a cotton tax being due in 1933 The carry-over from 1933 may also be small It is expected that complete export figures for 1933 will thus show a crop of 285,000 bales at least, probably 290,000 bales

Uganda cotton records do not remain for long 1929 provided the record for a while, when the 200,000-bale mark was passed The actual figure was 204,057 This was exceeded last year when 207,326 was the figure 1933, however, will exceed this by the enormous margin of approximately 80,000 bales, representing more than 35 per cent increase on the record of the previous year Over a million acres were planted

UNION OF SOUTH AFRICA.

The 1932-33 cotton crop in the Union of South Africa and Swaziland is now only estimated at 2,000 bales of 478 lbs , according to a report from Pretoria This is even less than the small crop of 2,342 bales harvested last season Low prices and adverse weather conditions caused the acreage planted to be reduced, and the production is the smallest since 1921-22 The 1932 annual report of the Rhodesian Department of Agriculture states that the 1932 33 cotton crop for Southern Rhodesia amounted to 485 bales, as compared with 1,046 bales in 1931-32 Unofficial reports indicate that cotton prospects for Tanganyika are good, but largely dependent upon favourable weather

U.S.S.R.

Cold, rainy weather deterred the cotton planting campaign in middle Asia and Transcaucasus in April so that in early May present reports were speaking of a delayed spring. Correspondingly, the acreage planted to cotton in middle Asia by April 20 was considerably below that of the previous year—184 108 hectares (454 900 acres) compared with 351 000 hectares (867 300 acres), in 1932. First ploughing was also completed on a smaller acreage than a year earlier by April 20 and the press complained that there was a great discrepancy between the first and second ploughing in all important regions. Another complaint was that not all of the soil prepared for planting was actually planted by April 20, with plantings to that date amounting to only about half of the area prepared. As usual, the press was blaming the lack of energy of local organizations and farmers for the slow progress of plantings indicating that the unfavourable weather conditions were not the only reason for the backwardness of the campaign.

The latest estimates from Soviet sources for the planned cotton area for the 1933-34 crop place it at about 5,100,000 acres, which is somewhat lower than the earlier estimates, and compares with 5,367,000 acres planted in 1932, according to the Bureau of Agricultural Economics. It is planned, however, by the Soviet authorities to increase the yield per acre. *(U.S.D.C.)*

Cotton sowing in Azerbaidjan district was completed on May 17, an area of 191,000 ha. having been covered. The plan for Egyptian cotton sowing was fulfilled 103 per cent.

(Moscow Chamber of Commerce.)

The ever growing importance of the cotton industry in Azerbaidzhan renders this area the second cotton centre of Soviet Russia. This year, Azerbaidzhan is expected to plant to cotton 191,000 hectares, and it is hoped that the average yield will be 7 centners per hectare.

I.I.A. International Institute of Agriculture
U.S.D.C. United States Department of Commerce

World Production and Acreage.

The preliminary estimate of the 1932-33 world production, according to the Bureau of Agricultural Economics, Washington, is now placed at 24,000,000 bales of 478 lbs., compared with 27,500,000 bales in 1931-32, 25,800,000 bales in 1930-31, and is the smallest estimated world production since 1923-24 with the exception of 1928, when the estimated total was also 24,000,000 bales. While the world production in 1932-33 is estimated to have declined 3,500,000 bales, or 13 per cent., the United States production dropped 4,100,000 bales or almost one fourth. The larger crops in China and India partially offset the decline in the U.S.A.

crop. The increases in the Indian and Chinese crops were due largely to more normal yields this season, the yields in 1931-32 being unusually low. However, the estimated harvested acreage in China increased considerably, due to the fact that in 1931-32 the acreage was materially reduced by floods. The decline of almost 40 per cent. in the Brazilian crop resulted from a severe drought in the northern states, which reduced the yields to the lowest levels for many years The 1932-33 Brazilian crop was the smallest since 1916-17.

The present estimate of the 1932-33 world acreage of 77,400,000 acres represents a decrease of 3,400,000 acres, or only 4.2 per cent. from that of 1931-32. This is, however, the smallest world acreage since 1927-28, and was 9 per cent. below 1929-30 and 10.7 per cent below the record acreage of 1925-26. These world estimates are based on the revised United States acreages, and for that reason are not comparable with previously published world acreage estimates. The greatest decrease in the 1932-33 acreage occurred in the United States, India and Egypt The 35 per cent. decline in Egypt's acreage was, to a considerable extent, the result of an acreage-restriction law.

COTTON ACREAGE AND PRODUCTION IN COUNTRIES REPORTING FOR 1932-33, WITH COMPARISONS

Country	1929-30 1,000 acres	1930-31 1,000 acres	1931-32 1,000 acres	1932-33 1,000 acres	Percentage 1932-33 is of 1931-32
ACREAGE:					
United States	43,242	42,454	38,705	35,939	92·9
India	25,922	23,812	23,722	22,558	95·1
Russia	2,608	3,911	5,346	5,367	100·4
China*	5,133	5,228	4,800	5,300	110·4
Brazil .. .	1,436	1,435	1,500	1,538	102·5
Egypt	1,911	2,162	1,717	1,135	65·0
Uganda . ..	663	740	866	1,070	123·6
Chosen .. .	456	473	472	393	83·3
Turkey (Asiatic) .	301	609	491	358	72·9
Anglo-Egyptian Sudan .	369	387	336	324	96·4
Mexico .. .	492	390	319	188	58·9
Syria and Lebanon .	60	60	75	23	30·7
Spain	21	45	14	20	142·9
Bulgaria . . .	14	14	14	20	142·9
Eritrea	6	6	7	5	71·4
Italy	8	9	4	3	75·0
Total above countries ..	82,642	81,735	78,418	74,241	94·7
Estimated world total, including China ..	85,100	84,100	80,800	77,400	95·8

ACREAGE AND PRODUCTION—*Continued*

Production —	1929–30 1 000 bales 478 lbs net	1930–31 1 000 bales 478 lbs net	1931–32 1 000 bales 478 lbs net	1932–33 1 000 bales 478 lbs net	Percentage 1932–33 is of 1931–32
United States	14 82	13 932	17 095	13 002	76.1
India	4 289	4 372	3 368	3 779	112.2
China*	2 116	2 250	1 700	2 300	135.3
Russia	1 279	1 584	1 843	1 950	105.8
Egypt	1 768	1 715	1 286	950	73.8
Brazil	584	471	557	348	62.5
Uganda	108†	158†	168†	218	129.8
Chosen	139	149	101	127	125.7
Anglo Egyptian Sudan	139	106	206	120	58.3
Persia	82‡	99	100‡	100‡	100.0
Mexico	246	178	210	95	45.2
Turkey (Asiatic)	100	74	91	28	30.8
Greece	15	16	14	16	114.3
Bulgaria	4	4	5	8	160.0
Spain	5	7	4	4	100.0
Syria and Lebanon	14	12	17	4	23.5
Nyasaland	5	8	4	2	50.0
Eritrea	1	1	2	2	100.0
Total above countries	25 719	25 141	26 773	23 053	86.1
Estimated world total including China	26 500	25 800	27 500	24 000	87.3

Compiled by the Division of Statistical and Historical Research largely from data received through the Foreign Agricultural Service including information received up to May 22. Official sources and International Institute of Agriculture except as quoted.

* Estimates of Chinese Millowners' Association for 1929–30. From 1930–31 to date the estimates of the Chinese Millowners' Association have been adjusted to make them comparable with estimates for previous years.

† Exports.

‡ From an unofficial source.

BRITISH EMPIRE COTTON GROWING.

Lord Derby presided at the annual meeting of the Empire Cotton growing Corporation, held in Manchester recently. Moving the adoption of the annual report he said that low prices had made cotton growing unprofitable for all undertakings and farmers, who had to maintain a European standard of life. Only the native grower had stood up to the storm.

Referring to the renewal of the levy he said that on this subject there was unanimity in Lancashire and not a dissentient voice in the House of Commons He thought he might be entitled to draw from this the conclusion that confidence in the work on which the corporation was engaged grew as years went by

In the course of the report it was stated —

" In face of the prevailing economic conditions it may seem remarkable at first sight that the crops of 1931-32 from the Empire's new fields—that is, excluding India—should be the largest on record The explanation is, however, to be found in the preponderating effect on the total output of the crops of two countries —Uganda and Anglo-Egyptian Sudan, which last year between them accounted for over 90 per cent of the whole In both these countries the crops of 1931-32 were very good, that of the Sudan being easily a record for the country In Uganda the natives were urged to increase the area under cotton, so that by producing larger crops they might be able to compensate themselves to some extent for smaller prices This policy has been pursued in the current season also, and is expected to result in a record crop On the other hand, in the Sudan the crop of 1932-33 will undoubtedly be a small one, the plants having suffered from disease, and, to a somewhat greater degree than usual, from pests also

Another interesting feature to be recorded is that the world's consumption of cotton from the new fields in 1931-32 was the heaviest on record—viz , about 422,000 bales, as against the previous highest figure of 345,000 in 1929-30 "

The yield in Anglo-Egyptian Sudan was 903,792 cantars of Sakel and 90,310 cantars of American type (a cantar is 312 lbs seed cotton), and the estimated yields for 1932-33 are 501,958 cantars of Sakel, and 75,330 cantars of American, the crop having been sown in unfavourable conditions, a yield below the average is expected In Kenya the 1932-33 crop is expected to show a considerable increase

Lord Derby also presided over the twenty-eighth annual meeting of the shareholders of the British Cotton growing Association, held in Manchester on the same day He thought the results of the past year's working would be regarded as satisfactory in view of the continued unexampled world-wide depression

The Indian Central Cotton Committee continued its excellent work Four research stations had been completed, and the committee was tackling the problems raised by the impurity of Indian cottons

There had been an increase in the total quantity of cotton produced in the Empire fields, due largely to the results achieved in the Sudan and Uganda, and he thought from this fact alone the one great thing that had shown itself was that in spite of the low price levels of produce the cotton-growing industry in these two places had been placed on a much sounder basis, for not only had the production been maintained but increased, and this could only be regarded as satisfactory One of the greatest steps towards world prosperity would be a larger return to those who produce cotton in the various Empire fields

BRITISH EMPIRE COTTON GROWING

EMPIRE COTTON CROPS FOR THE YEARS 1922-32, EXCLUDING INDIA

In Bales of 400 lbs

The seasons are given as covering two years (e g , 1926–1927) because in the majority of the countries named planting takes place in one calendar year and picking in the next In a few of these countries, however (e g , Tanganyika, Iraq, Cyprus, Malta and some of the West Indian Islands), the crop is harvested in the same year as that in which it is planted In such cases the figures should be read as relating to the crop grown and harvested in the *latter* of the two years at the head of the column

Country	1921–22	1922–23	1923–24	1924–25	1925–26	1926–27	1927–28	1928–29	1929–30	1930–31	1931–32
Anglo-Egyptian Sudan .	24,074	28,306	47,652	44,912	121,131	148,118	126,115	161,536	157,769	120,310	234,964
Uganda	48,290	88,046	128,604	196,038	180,859	131,728	138,486	204,057	129,969	191,305	203,265
Kenya	417	1,200	1,653	2,250	2,046	1,232	1,241	1,984	1,518	800	1,735
Tanganyika	7,175	11,434	18,793	21,724	24,280	15,966	32,954	27,785	23,136	11 322	16,500
Nyasaland .. .	5,422	4,036	6,873	7,718	4,976	2,792	4,470	6,095	9,331	4 205	5,067
Northern Rhodesia	80	102	500	379	506	32	17	—	—	—	—
Southern Rhodesia ..	—	—	1,650	4,907	6,803	639	90	280	1 481	1 974	579
Union of South Africa and Swaziland	2,740	6,523	8,730	16,936	20,381	10,242	11,013	9,774	16,213	8,123	2,801
Nigeria .. .	15,096	16,811	25,694	39,137	47,909	27 464	20,930	32,126	43,925	18,850	6,268
Gold Coast . .	49	15	93	1,132	1,218	285	264	296	200	297	263
Cyprus	1,505	1,233	3,397	3,320	4,614	2,110	2,146	3 610	4,778	2 827	1 194
Malta	193	118	573	782	507	342	541	379	293	201	41
Iraq	300	1,100	2,400	2,540	3,500	1 800	5,200	4,700	3,300	960	409
Ceylon	—	49	324	121	261	186	202	380	248	95	52
Queensland .. .	3,140	9,344	11,850	14,318	7,179	5,880	10,266	6,296	13,999	12,228	4,975
Fiji	—	85	157	123	824	356	114	271	398	266	90
West Indies	4,314	5,295	4,309	4,186	5,941	6,076	4,088	5,312	5 672	5,106	2,524
	112,795	174,697	263,252	360,523	432,935	355,248	358,137	464,881	412,230	378,869	480,727
Percentage		Increase 54·8	Increase 50 6	Increase 36 9	Increase 20 0	Decrease 17·9	Increase 0 8	Increase 29 8	Decrease 11·3	Decrease 8·1	Increase 26 8

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US GOVERNMENT COTTON ACREAGE REPORT.

The report issued on July 8 by the Crop Reporting Board in Washington on the acreage of cotton under cultivation on July 1 indicates an increase of 11.6 per cent on the area planted last year, the total returned being 40,798,000 acres. This compares with 36,542,000 acres planted in the previous year, 39,109,000 acres in 1931, and 43,339,000 acres in 1930. Lower California is estimated to have 54,000 acres under cotton, against 27,000 acres a year ago, but these are not included in the United States total.

The state details show increases all round. The increase in Texas amounts to 2,175,000 acres, in Oklahoma to 951,000 acres, in Arkansas to 206,000 acres, in Alabama to 184,000 acres, in Georgia to 162,000 acres, in Louisiana to 102,000 acres, in South Carolina to 101,000 acres, in California to 98,000 acres, in Tennessee to 86,000 acres, in North Carolina to 63,000 acres, in Mississippi to 39,000 acres, in Arizona to 23,000 acres and in Florida to 15,000 acres.

The following table gives details by states (in thousands of acres), with comparisons for the past three years —

	1933	1932	1931	1930
Virginia	78	71	71	92
North Carolina	1 324	1 261	1 213	1 460
South Carolina	1 779	1 678	1 768	1 967
Georgia	2 867	2 705	3 115	3 466
Florida	122	107	142	150
Missouri	451	410	355	382
Tennessee	1 167	1 081	1 057	1 140
Alabama	3 245	3 061	3 294	3 596
Mississippi	3 936	3 897	4 030	4 163
Louisiana	1 804	1 702	1 834	1 983
Texas	15 767	13 592	14 979	16 689
Oklahoma	4 122	3 171	3 403	4 009
Arkansas	3 642	3 436	3 341	3 593
New Mexico	116	114	119	133
Arizona	137	114	178	215
California	222	124	194	273
Other States	19	18	16	19
Total	40 798	36 542	39 109	43 339

The supplementary report on the cotton area issued by the Department states that the acreage figures obviously do not take into account any reduction likely to be made by farmers under the Agricultural Adjustment Administration programme. If a reduction is made the amount will be announced later.

Revised Estimates of the 1932 Cotton Crop.

The Crop Reporting Board of the United States Department of Agriculture, from the reports and data furnished by crop correspondents, field statisticians, co-operating State Boards (or Departments) of Agriculture and Agricultural Colleges, and census reported ginnings makes the following revised estimates of the cotton crop of 1932:—

State	Area in Cultivation July 1* (1,000 acres)		Area Picked* (1,000 acres)		Yield of Lint Cotton Picked per Acre* (Pounds)		Production† (1,000 bales—500 lb. gross)		Ginnings 1932 Crop as reported by Census May 16, 1933 Bales (500 lb. gross)
	1931	1932	1931	1932	1931	1932	1931	1932	
Virginia ..	71	71	70	70	317	233	40	34	31,165
N. Carolina ..	1,213	1,261	1,206	1,251	298	252	752	660	663,359
S. Carolina ..	1,763	1,678	1,759	1,661	273	206	1,005	716	716,225
Georgia	3,115	2,705	3,096	2,651	215	154	1,393	854	854,357
Florida	142	107	139	102	165	78	48	17	15,151
Missouri .. .	355	410	353	406	392	362	289	307	306,835
Tennessee	1,057	1,081	1,053	1,064	270	216	594	480	480,353
Alabama .. .	3,294	3,061	3,271	3,021	207	150	1,415	947	948,854
Mississippi .. .	4,030	3,897	3,994	3,830	211	147	1,761	1,180	1,179,781
Louisiana .	1,834	1,702	1,825	1,688	236	173	900	611	610,509
Texas	14,979	13,592	14,754	13,334	173	162	5,319	4,500	4,501,800
Oklahoma . .	3,403	3,171	3,376	3,108	179	167	1,261	1,084	1,083,713
Arkansas .. .	3,341	3,436	3,308	3,378	276	188	1,007	1,327	1,326,556
New Mexico . ..	119	114	117	112	412	307	101	72	69,868
Arizona	178	114	176	‡113	313	‡293	115	‡69	69,103
California	194	124	192	123	440	503	177	129	129,371
All other	16	18	16	18	363	393	12	15	14,418
U.S. total	39,100	36,542	38,705	35,939	211·5	173·3	17,095	13,002	13,001,508
Lower Calif.(Old Mexico)§	60	27	60	27	182	248	26	14	‖14,017

* Estimates of *acreage* and *yield per acre* are comparable with the *revised* acreage and yield estimates for the years 1866 to 1931 inclusive as published in a special report on May 10, 1933. These estimates are not comparable with any acreage and yield per acre estimates by the Department of Agriculture published prior to May 10, 1933

† Bales rounded to thousands, allowances made for interstate movement of seed cotton for ginning and added for U.S total.

‡ Inc. Pima long staple, 22,000 acres, yield 186 lbs. per acre, production 8,000 bales.

§ *Not* included in California figures, *nor* in United States total.

‖ Ginnings 13,960 running bales, as enumerated by California Crop Reporting Service.

Comments accompanying the above report state:—

The Crop Reporting Board, in revising statistics of acreage, yield and production of the 1932 cotton crop, estimates the area in cultivation in the United States on July 1, 1932, to have been 36,542,000 acres; the area harvested, 35,939,000 acres; and the yield of lint cotton to have been 173.3 lbs. per harvested acre. The report of the Bureau of the Census, published on May 16, placed final ginnings for the 1932 crop at 13,001,508 equivalent 500-lb. bales.

These revisions place the estimates of acreage and yield per acre in 1932 on a basis comparable with the revised estimates for the years 1860-1931, as published May 10, 1933

Estimates on the revised basis show a reduction of 7 1 per cent in harvested acreage and 6 6 per cent in acreage in cultivation July 1, compared with 1931 The preliminary estimate of harvested acreage made last December placed the reduction from 1931 at 7 6 per cent Revised acreage estimates for others years which are comparable with the estimates for 1932 of 35 939 000 acres harvested are as follows 1931, 38,705,000 acres, 1930, 42 454,000 acres, 1929, 43 242,000 acres 1928 42 432 000 acres 1927, 38,349,000 acres, 1926, 44,616,000 acres The revised estimates of yield per acre for the same years are as follows 1931, 211 5 lbs , 1930 157 lbs , 1929, 164 1 lbs , 1928 163 3 lbs 1927 161 7 lbs , and 1926, 192 8 lbs

The report of May 10, showing revised estimates of acreage and yield for all states and the United States for the years from 1866 to 1931, on a comparable basis with the 1932 estimates, may be secured from the Bureau of Agricultural Economics, Department of Agriculture, in Washington All future cotton crop reports of the United States Department of Agriculture will be comparable with these revisions and not with estimates previously published

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ACREAGE REDUCTION BY STATES

The announcement of Secretary of Agriculture Wallace of leasing of 5,566,000 acres of cotton land up to July 7 contained the following details by States up to that date —

	Acreage leased	Quota (25 per cent)	July 1st acreage
Virginia	* —	20 000	78 000
North Carolina	99 945	331 000	1 324 000
South Carolina	126 812	445 000	1 779 000
Georgia	158 343	717 000	2 867 000
Florida	10 567	31 000	122 000
Missouri	8 109	113 000	451 000
Tennessee	123 050	292 000	1 167 000
Alabama	605 478	811 000	3 245 000
Mississippi	740 500	984 000	3 936 000
Louisiana	137 149	451 000	1 804 000
Texas	2 494 872	3 942 000	15 767 000
Oklahoma	283 315	1 030 000	4 122 000
Arkansas	454 108	910 000	3 642 000
New Mexico	22 893	29 000	116 000
Arizona	* —	34 000	137 000
California	1 028	56 000	222 000
All other	* —	5 000	19 000
Total	5 566 169	10 200 000	40 798 000

* Not reported

Reduction in Yields from Stated Causes in 1932.

The Crop Reporting Board issued, on May 22 last, the following report:—

Reduction in cotton yields per acre due to various causes in 1932 is reported to have been 42.7 per cent. of a normal or full yield, based upon an inquiry to cotton reporters on this subject. In 1931 the reported reduction was 27.8 per cent.; in 1930, 47.1 per cent.; in 1929, 43.8 per cent.; and in 1928, 36.4 per cent.

The boll-weevil was the principal cause of damage in 1932 with loss reported at 15.2 per cent. for the Cotton Belt proper. This is considerably above the figures reported in the previous two years, and it is the highest percentage attributed to this cause since 1927. In 1931, loss in yield due to weevil was reported at 8.3 per cent.; in 1930, 5 per cent.; in 1929, 13.3 per cent.; in 1928, 14.1 per cent.; and in 1927, 18.5 per cent. The average damage attributed to weevil for the ten-year period 1922-1931 was 12 per cent The loss from this source was greatest in Georgia, Florida, Alabama and Mississippi, and in these states the reported percentages were higher than in any year since 1923.

Deficient moisture or drought was reported as being responsible for 8 per cent. reduction in yield, compared with 8.3 per cent. in 1931, and 27.7 per cent. in 1930. Damage attributed to excessive moisture was 3.9 per cent., compared with 2.6 per cent. in 1931 and 2.8 per cent. in 1930.

" Other climatic " causes, including floods, frost, heat and hot winds contributed 6.1 per cent., against 3.5 per cent. in 1931 and 6.3 per cent. in 1930. Plant diseases are reported to have caused losses of about 3 per cent., which is slightly above reported percentages in recent years. Loss due to insects other than boll-weevil about average, being reported at 3.1 per cent.

This statement on losses is based upon reports of correspondents made in March, on a crop damage inquiry in which the correspondents were asked to report the per cent. of a normal yield per acre of cotton harvested the preceding year, the per cent. of loss in yield, and to distribute the loss to stated causes. The resulting indicated percentages represent the consolidated judgment of the crop reporters, and are useful as a rough index of relative losses from the stated causes.

Details by states follow —

COTTON REDUCTION FROM FULL YIELD PER ACRE FROM STATED CAUSES 1930 1931 AND 1932

State	Deficient Moisture 1930	Deficient Moisture 1931	Deficient Moisture 1932	Excessive Moisture 1930	Excessive Moisture 1931	Excessive Moisture 1932	Other Climatic 1930	Other Climatic 1931	Other Climatic 1932
	%				%		%	%	%
Virginia	36	6	33	0	0	0	5	1	2
North Carolina	13	5	13	1	1	1	3	2	4
South Carolina	10	7	12	1	1	2	4	3	6
Georgia	12	16	5	1	0	6	5	4	4
Florida	5	14	5	0	0	7	2	1	2
Mexico	33	6	9	0	2	1	16	2	4
Tennessee	37	8	6	1	1	6	7	2	5
Alabama	22	8	2	1	1	8	4	2	3
Mississippi	31	2	3	1	8	8	4	4	5
Louisiana	33	9	10	3	3	5	7	3	7
Texas	28	9	9	4	3	2	6	4	8
Oklahoma	36	15	10	2	1	1	10	6	7
Arkansas	49	3	10	1	2	4	12	2	6
Average of 13 States	27.7	8.3	8.0	2.8	2.6	3.9	6.3	3.5	6.1

State	Plant Diseases 1930	Plant Diseases 1931	Plant Diseases 1932	Boll weevil 1930	Boll weevil 1931	Boll weevil 1932	Other Insects 1930	Other Insects 1931	Other Insects 1932
	%			%	%	%			%
Virginia	0	1	1	3	0	12	1	2	0
North Carolina	2	2	2	17	8	14	1	3	1
South Carolina	2	2	3	13	8	15	1	1	2
Georgia	2	1	3	7	7	22	1	1	3
Florida	0	1	5	14	10	25	0	1	2
Mexico	1	2	5	0	0	0	3	1	1
Tennessee	1	1	3	1	2	9	1	1	2
Alabama	2	2	3	4	8	21	1	1	2
Mississippi	2	2	3	3	15	25	1	1	2
Louisiana	1	2	3	3	11	15	1	1	3
Texas	2	3	4	4	9	11	3	3	5
Oklahoma	1	1	1	3	6	14	2	1	3
Arkansas	1	1	3	2	3	13	2	1	2
Average of 13 States	1.7	2.0	3.2	5.0	8.3	15.2	1.9	1.8	3.1

Revised Acreage and Yield Figures 1866-1931.

The Crop Reporting Board of the United States Department of Agriculture has just completed revised estimates of the acreage and average yield of cotton per acre in each state for the years 1866-1931. It is important to note that no change has been made in the statistics of total bales produced and ginned in each of the last ten years as already published for the United States, although significant adjustments have been made in the acreage and yield per acre estimates. Throughout most of the series the revisions have resulted in raising the estimates of yield per acre, and lowering the estimates of acreage correspondingly. All future cotton crop reports of the U. S. Department of Agriculture will be comparable with these revisions and not with estimates previously published.

The acreage of cotton harvested in the United States in 1931 on the revised basis is estimated to have been 38,705,000 acres. Comparable estimates, as revised, for other years are as follows: 1930, 42,454,000 acres; 1929, 43,242,000 acres; 1928, 42,432,000 acres; 1927, 38,349,000 acres; 1926 44,616,000 acres. The revised acreage estimates for these years are approximately 6 per cent. below the original estimates, offsetting equal percentage increases in the estimates of yield per acre.

The estimates of cotton production since 1899 are based on the enumerations of ginnings made annually by the Department of Commerce, and the only changes from these production figures have been to make minor adjustments where cotton grown in one state has been ginned in an adjoining state.

All persons who are interested in preparing or analyzing cotton estimates are specially urged to note carefully these revised estimates of acreage and yields, in order that there be no misunderstanding in subsequent reports.—

REVISED ESTIMATES OF ACREAGE AND YIELD PER ACRE—1866–1931.

Year	*Planted 1,000 Acres	Harvested 1,000 Acres	Yield per Acre lbs	Year	*Planted 1,000 Acres	Harvested 1,000 Acres	Yield per Acre lbs
1866	—	7,666	121·5	1899	—	24,163	185·0
1867	—	7,864	142·6	1900	—	24,886	194·7
1868	—	6,973	150·7	1901	—	27,050	168·2
1869	—	7,751	155·4	1902	—	27,561	184·7
1870	—	9,238	208·2	1903	—	27,762	169·9
1871	—	8,285	139·0	1904	—	30,077	213·7
1872	—	9,580	182·3	1905	—	27,753	182·3
1873	—	10,998	168·3	1906	—	31,404	202·3
1874	—	10,753	157·0	1907	—	30,729	172·9
1875	—	11,348	181·2	1908		31,091	203·8
1876	—	11,747	167·6	1909	31,744	30,555	156·5
1877	—	12,606	170·4	1910	32,480	31,508	176·2
1878	—	13,539	167·5	1911	35,634	31,916	215·0
1879	—	14,474	180·5	1912	33,199	32,557	201·4
1880	—	15,921	190·9	1913	35,721	35,206	102·3
1881	—	16,483	149·0	1914	36,197	35,615	216·4
1882	—	15,638	208·9	1915	30,514	29,951	178·5
1883	—	16,295	162·0	1916	33,977	33,071	165·6
1884	—	16,849	155·1	1917	33,064	32,245	167·1
1885	—	17,922	169·9	1918	36,123	35,038	161·1
1886	—	18,370	164·3	1919	34,573	32,906	165·9
1887	—	18,793	175·1	1920	35,872	34,108	186·7
1888	—	19,520	169·5	1921	29,716	28,678	132·5
1889	—	20,191	176·9	1922	32,176	31,361	148·8
1890	—	20,937	195·5	1923	37,000	35,550	136·1
1891	—	21,503	198·7	1924	40,692	39,503	165·0
1892	—	18,869	168·7	1925	45,972	44,390	173·5
1893	—	20,356	175·3	1926	45,847	44,616	192·8
1894	—	21,886	219·0	1927	39,479	38,349	161·7
1895	—	19,839	172·2	1928	43,735	42,432	163·3
1896	—	23,230	175·2	1929	44,458	43,242	164·1
1897	—	25,131	209·0	1930	43,339	42,461	157·0
1898	—	24,715	223·1	1931	39,109	38,705	211·5
				1932	36,542	35,939	173·3

* Beginning 1927, planted acreage estimates relate to acreage in cultivation July 1; prior to 1927, to acreage in cultivation June 25.

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Cotton Acreage Reduction Plan.

COTTON history is in the making this week. Approximately two million producers of the South will have opportunity to decide whether a programme shall be attempted to reduce the production of this year's cotton crop. President Roosevelt himself has appealed to every cotton producer to face the facts and co-operate in the plan made public by the Secretary of Agriculture. The plan offered is as follows —

I. Through the instrumentality of the federal and state farm extension services, vocational teachers, volunteer committees set up in the Cotton Belt and other available agencies, the Administration will ascertain to what extent the producers of cotton are willing to take out of production lands now planted to cotton in consideration of benefit payments or options plus benefit payments in accordance with its proposals. The willingness of the producers is to be expressed in the form of signed offers prepared in conformity with regulations prescribed by the Secretary of Agriculture.

II. Within a period of time to be prescribed and published by the Secretary, these agencies will confer with such producers for the purpose of presenting the proposals of the Agricultural Adjustment Administration and of ascertaining to what extent such producers will sign binding offers for the reduction of cotton acreage.

III. The Administration will submit to the producers for acceptance or rejection the following proposal, which, if and when signed by growers and by the Secretary, will constitute a contract.

(*a*) That the producer agrees to take out of cotton production a certain acreage now planted to cotton.

(*b*) That as a consideration for the abandonment of such acreage, the grower shall receive the following: –

EITHER

(1) A cash payment with cotton option as stated in such offer signed by the producer. The amount of such cash payment is to be on a per acre basis, subject to the regulations prescribed by the Secretary, and in accordance with the following schedule:

SCHEDULE OF PAYMENTS WITH OPTION

Yield per acre lbs.	Benefit payment per acre with option dollars
100–124	6.00 Cash plus option on Govt. cotton at 6 cents a lb.
125–149	7.00
150–174	8.00
175–224	10.00
225–274	11.00
275 and over	12.00

OR, AT THE GROWER'S ELECTION,

(2) A cash benefit without cotton option as stated in such offer when signed by the producer. The amount of such benefit pay

ment is to be on a per acre basis, subject to regulations prescribed by the Secretary of Agriculture, and in accordance with the following schedule —

SCHEDULE OF PAYMENT WHEN PAYMENT IS MADE IN CASH ONLY

Yield per acre lbs	Payment per acre without option dollars
100–124	7.00
125–149	9.00
150–174	11.00
175–224	14.00
225–274	17.00
275 and over	20.00

The voluntary agreements above referred to are to be in a form prescribed by the Secretary, which, when signed by the producers, is to constitute an irrevocable offer for a limited, specified period of time during which the Secretary may accept or reject it.

IV. The agencies selected to obtain these offers of acreage will in accordance with regulations prescribed by the Secretary, transmit the data furnished by these offers to the Agricultural Adjustment Administration.

V. If the Administration shall decide to take cotton out of production in accordance with this plan, it will, within the time designated in the offer, give notice to the producers whose signed offers have been accepted. It shall then be the duty of each such producer to comply with the regulations of the Secretary in the matter of taking out of cotton production the acreage covered by his offer. Included in the regulations shall be a requirement that the premises will be inspected prior to and subsequent to taking the acreage out of production. Upon satisfactory showing of compliance with the terms of the contract each producer will receive the cash payment to which he is entitled and, in addition, if he has so elected, he will receive a non transferable option contract under which the Secretary agrees to sell to the producer a stipulated quantity of cotton not in excess of the amount of the reduction in production which is estimated to have resulted from the acreage reduction.

VI. In accordance with the Act a processing tax shall be in effect on August 1, 1933 for the amount required by the terms of the Act. When and if it is determined to take a definite cotton acreage out of production, the Secretary of Agriculture will jointly with the Secretary of the Treasury, estimate the amount of money which will be required currently for such purposes. Such sums as are needed from time to time shall be advanced to the Secretary of Agriculture. Benefit payments will be made promptly after producers have complied with their agreement.

VII. Land taken out of cotton production may be used for the production of soil improvement or erosion preventing crops or food and feed crops for home use.

VIII. The work of carrying out the foregoing plan has been assigned to Chester Davis, Director Production Division, C. A. Cobb, Chief, Cotton Production Section and Lawrence Myers, Economic Adviser, Agricultural Adjustment Administration.

The State and Federal extension services, under the direction of Dr C W Warburton, will co operate in carrying out the field work as will the extension services of the various States

In order to bring the proposal before every cotton grower, a "Cotton Week" was designated for the seven days commencing June 26 Essential materials for the campaign were printed and rushed to the South, and field workers engaged themselves in an attempt to place the plan and the contracts for reduction in acreage before the individual producers

In his endorsement of the programme and his appeal to the growers to co-operate, President Roosevelt said —

"The fate of any plan depends upon the support it is given by those who are asked to put it into operation This programme for the cotton producer essentially places the responsibility upon the individual farmer He and he alone will, in the last analysis, determine whether it shall succeed This plan offers the cotton producer a practical, definite means to put into immediate application the methods which Congress has prescribed to improve his situation I have every confidence that the cotton producer will face the facts and co operate fully in the reasonable and practical plan that is proposed"

The document which the grower will be given an opportunity to sign is labelled "Offer to Enter Into Cotton Option Benefit or Benefit Contracts" When the cotton producer signs this document it constitutes a binding offer of a definite amount of his acreage planted in cotton It becomes a completed contract when the Secretary of Agriculture gives written notice of its acceptance Secretary Wallace has announced this is contingent only upon a sufficiently substantial response from the South, some reports state a minimum of six million acres

(*Commerce and Finance*, June 28, 1933)

The Tare Situation and Fundamental Causes.

"AMERICAN cotton has often been characterized as one of the most unsatisfactorily packaged commodities entering the channels of world commerce Although the method of preparing practically every other American commodity for market has undergone continual improvement, cotton is baled in about the same way it was several generations ago"

The above is the introduction to a publication just received from the United States Department of Agriculture, Bureau of Agricultural Economics, Washington, D C, entitled "American Cotton Tare Practices and Problems" This publication will be of extreme interest to cotton-mill men using American cotton throughout the world Those requiring a copy should apply to the above address

The following is a copy of the summary published at the end of the pamphlet —

"The American raw-cotton package is not wholly satisfactory because it does not adequately protect the contents against waste and damage, because the lack of uniformity in weight of tare makes for uncertainty and risk in all transactions in raw cotton, and because its unattractive appearance unfavourably affects sales in foreign markets

"The fundamental causes of the unsatisfactory situation with respect to American cotton tare are (1) The system of gross-weight selling in domestic markets, and (2) the arbitrary deduction made for tare in foreign markets Both of these encourage the use of bale covering materials chosen on the basis of cheapness and excessive weight rather than on the basis of protection afforded the bale contents

"At present, approximately 98 per cent of the crop is packaged in square bales and 2 per cent in round bales

"Coverings used on American cotton bales consist principally of baggings made from new jute cuttings, used jute fibre and sugar-bag cloth There is considerable variation in the weights of these baggings per pattern

"Nine pounds of ties are customarily used on American square bales, regardless of density There are variations from this weight, but they are of minor importance

"The average tare on a square gin bale is approximately 21 lbs , but there is a wide variation from this figure for individual bales

"Patches are applied to compressed bales to cover sample holes, to provide a marking surface, and, under the present gross-weight system of selling, to adjust the weight of the bale covering materials to conform with tare allowance in the market to which the cotton is to be shipped Patching materials consist principally of coarse jute fabrics or of second hand burlap bags of various kinds

"Round bales are bound with closely woven new burlap weighings 2^1 lbs per pattern Ties are not used The density of the round bale is not changed after leaving the gin

"In the 1930 31 season approximately 70 per cent of all bales compressed at interior points were compressed to standard density, whereas at ports approximately 95 per cent of the bales were compressed to high density

"Most domestic cotton mills prefer to receive cotton in the form of standard-density bales High-density bales are objected to because of the difficulty in opening and conditioning preparatory to spinning

"The tare allowance at domestic mills for compressed bales is 4 8 per cent of the gross weight, or 24 lbs per 500 lb bale

"The marked lack of uniformity in weight of tare on individual bales makes it necessary for the mills to protect themselves against over tare by stripping and weighing bale-covering materials from a part of the bales in each shipment This process is expensive, and the assessing and collecting of claims for over-tare adds to the complications of doing business

“American cotton is sold in foreign markets on a modified net weight basis. A fixed allowance is deducted for tare, and claims for over-tare are made for any weight of covering materials in excess of the fixed allowance. Under this system the shipper who delivers bales carrying less than the allowable tare is penalized in that he delivers proportionately more cotton than he is paid for.

“Although there are variations in methods of calculating tare weights and tare allowances in the various foreign markets, in general the allowable tare is 26.5 lbs. per 500-lb. bale, or approximately 5.3 per cent. of the gross weight of the bale.

“There is considerable variation in the tare rules of the organized exchanges and trade associations, as well as in the laws of the various cotton-producing States that have enacted legislation governing cotton bale tare.

“The adoption of a system of net-weight selling would provide an incentive to eliminate the wasteful practices inherent in the present gross weight system, and would benefit both growers and consumers of cotton by reducing marketing costs.

“Net-weight trading in cotton would be feasible only if accompanied by some positive provision for the standardization of bale-covering materials, which would permit of ascertaining the net weight of a bale of cotton conveniently and without undue expense. Standardization would also insure the use of materials that would provide adequate protection to the bale contents.

“The essential features of a tare-standardization programme include the adoption of definite specifications as to dimensions, weights, and strength of bale-covering materials, including bagging, ties and patches. In the interest of economy in covering the crop, and consistent with physical suitability, the standardization programme should include a variety of materials, but a single standard is essential for each distinctive material.

“Of the materials now in use, it is believed that new and re-woven jute, sugar-bag cloth and cotton could be standardized for bagging and patches within a reasonable range of tolerance as to weight and strength.

“Steel-band ties, as now commonly used, would appear to offer no special difficulty of standardization. The incentive to use light weight materials that would follow the adoption of net-weight trading may make advisable the standardization of steel-wire ties also.

“It is doubtful whether the standardization of bale-covering materials would materially affect costs of these materials to growers or ginners. On the other hand, the economies in the marketing of cotton that would accrue from the adoption of net-weight trading and standardized tare should be reflected back to growers, to a certain extent, in the form of increased prices.

“Under a system of net-weight trading and standardized tare, marketing agencies would no longer be able to exact a profit by adding patches to cotton bales, but would realize definite advantages in the way of freight savings, simplification of trading practices and price calculations, elimination of risks associated with uncertainties as to weight of tare, possible savings in insurance, savings in customs duties in certain instances, and in the sales advantage of a neater package

Manufacturers using raw cotton would benefit from the change by the elimination of the present uncertainty as to exact cost of raw material which accompanies irregular weight of tare, and from the reduction in waste and damage that now results from the use of unsuitable bale covering materials

" The standardization of bale covering materials would require manufacturers of these materials to adjust their production to the specifications adopted On the part of most of these manufacturers the readjustment would be minor

" The diversity of interests of the various elements in the cotton industry has made it impossible to effect the change to net-weight trading and standardized tare by trade action or agreement The adoption of net-weight trading without the standardization of bale coverings would not solve the problem It can be solved only by the general adoption of net weight trading combined with some positive provision for the standardization of tare that will insure the use of materials of strength adequate for the purpose, and that will make it possible to ascertain the net weight of the cotton conveniently and without undue expense "

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RUSSIA TO BUY AMERICAN COTTON.

An announcement has been made by the Chairman of the Reconstruction Finance Corporation, that, with the approval of President Roosevelt and Secretary of the Treasury, Mr Woodin, loans to American exporters to finance the sale of from 60,000 to 80,000 bales of cotton for shipment to Russia had been authorized

According to a dispatch to the *New York Times* the loans will be for about $4,000,000 and will be available without delay so that most of the cotton can be shipped this month

This announcement was made following a conference of Assistant Secretary of State Raymond Moley with Mr Maxim Litvinoff, Soviet Foreign Commissar, in London

The loans are stated to be for one year at 5 per cent interest and will be secured by the notes of the Amtorg Trading Corporation, an American corporation owned by the Russian Government, unconditionally guaranteed by the State Bank of the U S S R

The Amtorg Trading Corporation will pay 30 per cent of the purchase price at the time of shipment and expects to ship a large part of the cotton in the month of July

It is understood that most of the cotton will be sold to Russia by two large spot firms

The loan will be the first of its kind sanctioned by the United States Government since the war period

THE COTTON INSECT SITUATION.

The cotton insect situation for the Belt as a whole continued favourable during the past week The cotton leaf worm was reported from the vicinity of Nueces County Texas and may spread northward in sufficient numbers to cause some damage However high temperatures in the western half of the Belt have been against the multiplication of practically all cotton pests In the northern portion of the eastern half of the Belt showers and relatively low temperatures during the week ended July 12 did not occasion any considerable amount of weevil control and wet summer conditions would enhance weevil damage possibilities in this area In the southern half of the Belt from Mississippi eastward the crop is too well fruited and too far advanced for the weevil to overcome the handicap of dry June weather conditions and high temperatures in time to do serious damage

Attention is drawn to weevil damage possibilities in the northern half of the Belt from about Vicksburg Mississippi eastward Daily temperature recorded in this area since June 25 have been mostly below the effective killing temperature zone, which begins at about 95° F The period June 25 to about July 25 represents the main development period of the first weevil generation, and, to date high temperatures have not caused any considerable amount of weevil control Should wet weather conditions develop in the near future over this area weevil damage would undoubtedly prove to be a very decided limiting factor in production In the western half of the Belt high temperatures have held practically all cotton pests under control (*American Cotton Crop Service* July 12)

Moisture in American Cotton.

Paper prepared by N. S. PEARSE, General Secretary, International Cotton Federation, for the International Cotton Congress in Prague and Carlsbad, June, 1933.

UNTIL comparatively recent years the question of moisture in cotton has proved as burdensome to the spinner as the Old Man of the Sea was to Sinbad the Sailor and has been the subject of discussion at a number of our Congresses. In spite of various attempts to solve this extremely difficult but serious problem, not much progress was made until after the Barcelona Congress in 1929—after which the present moisture agreement between the Egyptian cotton exporters and spinners began to assume a definite shape. Since the agreement was signed no dissatisfaction has been voiced by either the spinner or the exporter and the agreement has proved of mutual benefit.

The question was again raised at the Paris Congress in 1931—this time in connection with American cotton. It was decided that affiliated associations be requested " to supply to the Head Office in Manchester, the results of moisture tests of American cotton undertaken by them on a uniform system, with a view to their tabulation and publication in a similar form to those compiled for Egyptian cotton."

The first tabulation of tests compiled was submitted to the members of the International Cotton Committee in London, early in 1932. The result of this showed that the average percentage of moisture of all tests was as high as 9·21 per cent. or ·71 per cent. higher than the recognised standard. Out of a total of 172 tests, only 50 were drier than the standard and 122 showed an excess of moisture. At the drier end of the tabulation, we had three Texas shippers with an average well below 8 per cent., which serves to emphasize the fact that American cotton *can be shipped dry.* The driest shipment contained only 6·40 per cent. of moisture and that containing the most moisture, 11·60 per cent. There were five shippers who did not send a single shipment containing more than 8·5 per cent. of moisture. On the other hand, there were nine shippers who did not ship a single dry shipment.

The French Cotton Spinners Association has always made a very close study of this important subject and, before the War, had erected a testing house in Havre to test the cotton as it arrived at that port. At the London Committee Meeting that Association submitted the following table of tests taken on American Cotton from the cotton seasons 1923–24 to 1930–31.

TABLE I.

RÉSUMÉ OF TESTS TAKEN AT HAVRE ON AMERICAN COTTON ON DISEMBARKATION, BASED ON A REGAIN OF 8½ PER CENT. HUMIDITY, 1923–1931.

Cotton Season	Number of bales tested	Average gain or loss to Spinner	Average percentage gain or loss		Weight per bale represented by the gain or loss in kgs.	
			% gain	% loss	gain	loss
1923–24	58,647	loss	—	0·274	--	0·616
1924–25	101,523	gain	0·394	--	0·873	
1925–26	102,331	loss	--	0·441	-	0·963
1926–27	119,738	loss	—	0 365	·	0·838
1927–28	70,076	gain	0·259	—	0·584	- -
1928–29	42,374	loss	—	0·305	—	0·692
1929–30	28,089	loss	–	0·127	—	0·301
1930–31	19,850	gain	0·140	—	0·328	- -

As this table gives information over a long period of years and covers some half million bales, it is reasonable to assume that they give a very true average retrospective of the situation during this period as affecting all cotton spinners consuming American cotton. If we take the total world's consumption of American cotton over each year of the above period, and if we assume the price ruling at the close of the season to be the average price for that season, we are able to compile the following table :—

TABLE II.

GAIN OR LOSS IN POUNDS STERLING TO SPINNERS ON TOTAL WORLD'S CONSUMPTION OF AMERICAN COTTON.

Seasons 1923–31

Cotton season	Spinners' Gain	Spinners' Loss	Average Price for season in pence per lb. Middling at Liverpool
1923–24	—	£1,109,907	17·66
1924–25	£1,462,728	—	13·76
1925–26	--	1,308,070	10·77
1926–27	—	989,981	8·15
1927–28	923,214	--	11·17
1928–29	—	1,008,153	10·52
1929–30	—	327,310	9·09
1930–31	187,643	—	5·71
	Net loss ..	£2,169,836	

Of eight cotton seasons three showed a gain to the spinners. This gain has been offset against the five seasons in which the spinners sustained losses. If the tables be studied, it will be seen that the average of all shipments was in the neighbourhood of 9·2 per cent.

The net loss to the world's spinners of American cotton alone is shown as £2,169,836 during the period under review, or a yearly average of £271,229, which equals an average loss per spindle of 0·478 pence. Nearly a halfpenny per spindle averaged out over 136 million American spindles.

The tabulation of tests collected at the Head Office in Manchester for the 1932–33 season has been made and is shown opposite :—

TABLE III.—MOISTURE TESTS OF AMERICAN COTTON (2nd Tabulation)

Key No. of the Shipper		Total No. of tests	No. of tests showing Excess moisture *over* 8½% regain (Wet)	No. of tests showing Percentage Moisture *under* 8½% regain (Dry)	No. of bales in shipments tested	Average moisture percentage Wet	Average moisture percentage Dry
1	Bremen	2		2	100		7·05
2	U S A	1		1	100		7·14
3	„	3		3	150		7·82
4	„	2		2	100		7·85
5	Havre	1		1	50		7·97
6	U S A	18	9	9	950		8·11
7	„	2	1	1	100		8·12
8	„	1		1	100		8·15
9	„	1		1	50		8·25
10	„	2		2	100		8·26
11	„	2		2	100		8·31
12	„	1		1	100		8·33
13	„	3	1	2	150		8·34
14	„	1		1	50		8·40
15	„	6	2	4	300		8·42
16	„	2	1	1	100		8·45
17	„	11	4	7	970	–	8·46
18	„	6	3	3	400		8·47
19	„	1	—	1	50	–	8·48
20	Zurich	14	7	7	625	—	8·48
21	U S A.	1	1	—	100	8·57	
22	„	1	1	—	50	8·57	
23	„	2	1	1	100	8·60	
24	„	4	2	2	200	8·63	
25	„	13	8	5	900	8·66	
26	„	5	3	2	250	8·67	
27	Bremen	3	1	2	125	8·70	
28	U.S A.	1	1		50	8·72	
29	„	2	1	1	100	8·72	
30	Havre	8	5	3	400	8·73	
31	U S A.	4	3	1	200	8·75	
32	„	1	1		130	8·78	
33	„	1	1	–	50	8·81	
34	„	23	16	7	1,200	8·85	
35	„	4	3	1	250	8·85	
36	Havre	1	1		50	8·91	
37	U S A.	1	1	–	50	8·94	
38	Bremen	37	30	7	1,405	8·94	
39	„	4	4		125	8·95	
40	„	4	3	1	175	8·98	
41	U S A	1	1	—	50	9·07	
42	Rotterdam	9	7	2	405	9·13	
43	U S A	2	1	1	100	9·13	- -
44	„	2	2	1	100	9·14	–
45	Bremen	8	6	2	550	9·20	-
46	„	28	25	3	1,493	9·20	–
47	„	7	6	1	200	9·20	—
48	Vienna	2	2	—	100	9·24	- -
49	Bremen	1	1	-—	25	9·27	- -
50	„	2	2	—	100	9·27	- -
51	U S A	8	6	2	457	9·27	–
52	Zurich	7	5	2	400	9·38	
53	Bremen	1	1		50	9·48	
54	U.S.A	1	1		50	9·50	–
55	Bremen	3	3		200	9·50	--
56	„	4	4		203	9·55	- -
57	U S A.	5	5	–	250	9·62	- -
58	Bremen	1	1	—	50	9·70	—
59	Zurich	1	1	—	50	10·00	—
60	U S A	2	2	-	100	10·55	—
61	Bremen	1	1	—	50	11·37	—
62	„	1	1	—	50	11·47	—
	Total	297	199	98	15,588		

Weighted average moisture content .. .. .. 8·757

Note how the American shippers predominate up to 8·9 and that they are in the minority above that figure.

Although the weighted average moisture content of all the tests is 8·757 per cent. and shows a marked decrease from the figure previously obtained (9·21 per cent.) at first sight it appears to show a satisfactory improvement. However, a detailed examination reveals that this lower figure is entirely due to the low humidity content of shipments shipped direct from the American exporter to the spinner. Referring to Table III we see that only three European merchants shipped cotton below 8·5 whereas 17 American firms come under this category.

If all the tests of United States shippers in Table III are extracted it will be found that the average for these works out at 8·505 per cent. —a figure as nearly ideal as anyone could possibly desire. Nevertheless, it should be remembered that the above figure is only an average and fully 50 per cent of the shipments from the States were damp, as a close perusal of the table will show. As regards the European merchants who are located in Germany, France, Switzerland, Holland and Austria, their average for 6,981 bales amounts to 9·069 per cent. of moisture. (See Table IV.)

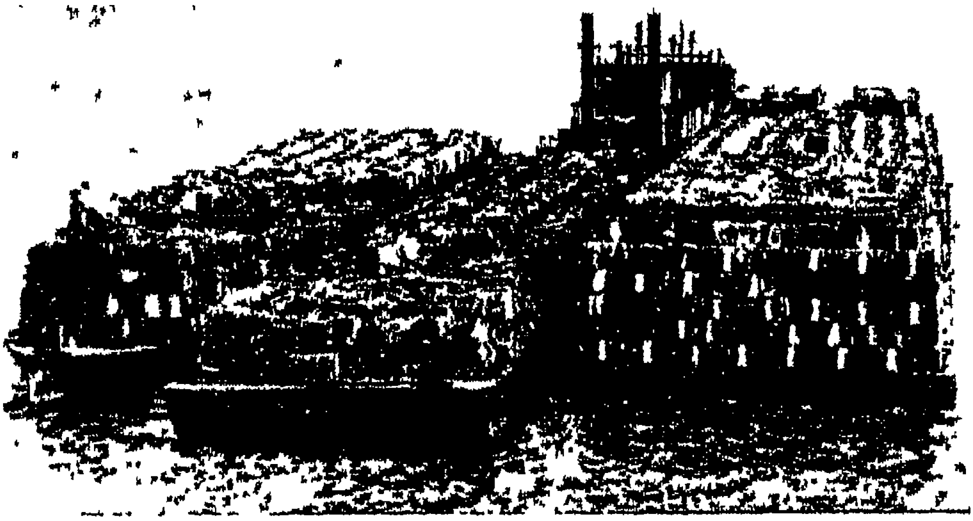
TABLE IV

EUROPEAN MERCHANTS

Key No in combine list		Bales	Average moisture
1	Bremen	100	7·05
5	Havre	50	7·97
20	Zurich	625	8·48
27	Bremen	125	8·70
30	Havre	400	8·73
36	"	50	8·91
38	Bremen	1,405	8·94
39	"	125	8·95
40	"	175	8·98
42	Rotterdam	405	9·13
45	Bremen	550	9·20
46	"	1,493	9·20
47	"	200	9·20
48	Vienna	100	9·24
49	Bremen	25	9·27
50	"	100	9·27
52	Zurich	400	9·38
53	Bremen	50	9·48
55	"	200	9·50
56	"	203	9·55
58	"	50	9·70
59	Zurich	50	10·00
61	Bremen	50	11·37
62	"	50	11·47
Total 24		6,981	
Weighted average Europe			9·069

It would therefore appear that a considerable quantity of moisture is absorbed by the cotton bales while in storage in the European warehouses. It is known to the writer that a bale of Egyptian cotton landed in Manchester, weighed and immediately placed into the warehouse, gained 20 lbs. in three days, i.e., 2·66 per cent. Needless to say Manchester weather kept up the reputation given to it by people not living in Manchester, as it rained heavily during this period.

It is well known, however, that cotton gains in weight during its crossing of the Atlantic, and this is not surprising when one bears in mind [illegible] humid atmosphere prevailing when passing through the Gulf Stream. Knowing this, American shippers add 5 to 10 lbs. per [illegible] on to the original weight for invoice and embarkation purposes. It may be that the average moisture content of cotton in the United States Cotton Belt is 1 to 2 per cent. less than it is in Europe, for we must remember that our spinning mills are, as a rule, situated in districts having a humid climate. It appears to me that here lies



Unprotected Cotton on a Mississippi Cotton Boat

Shipments such as these travel down the river from Memphis to New Orleans without any covering.

scope for some interesting and useful research work. Moisture tests could be taken of the cotton from the bale in the gin yard right through to the port of embarkation. In this direction the American shippers are of the opinion that cottons from the various States will vary in their degree of moisture content. One would expect cotton from Texas and California to be dry, whereas cotton from Mississippi and from the Atlantic States might well be damp. Some figures obtained during the last tabulation partly bear out this suggestion, as will be seen from the following table :—

TABLE V

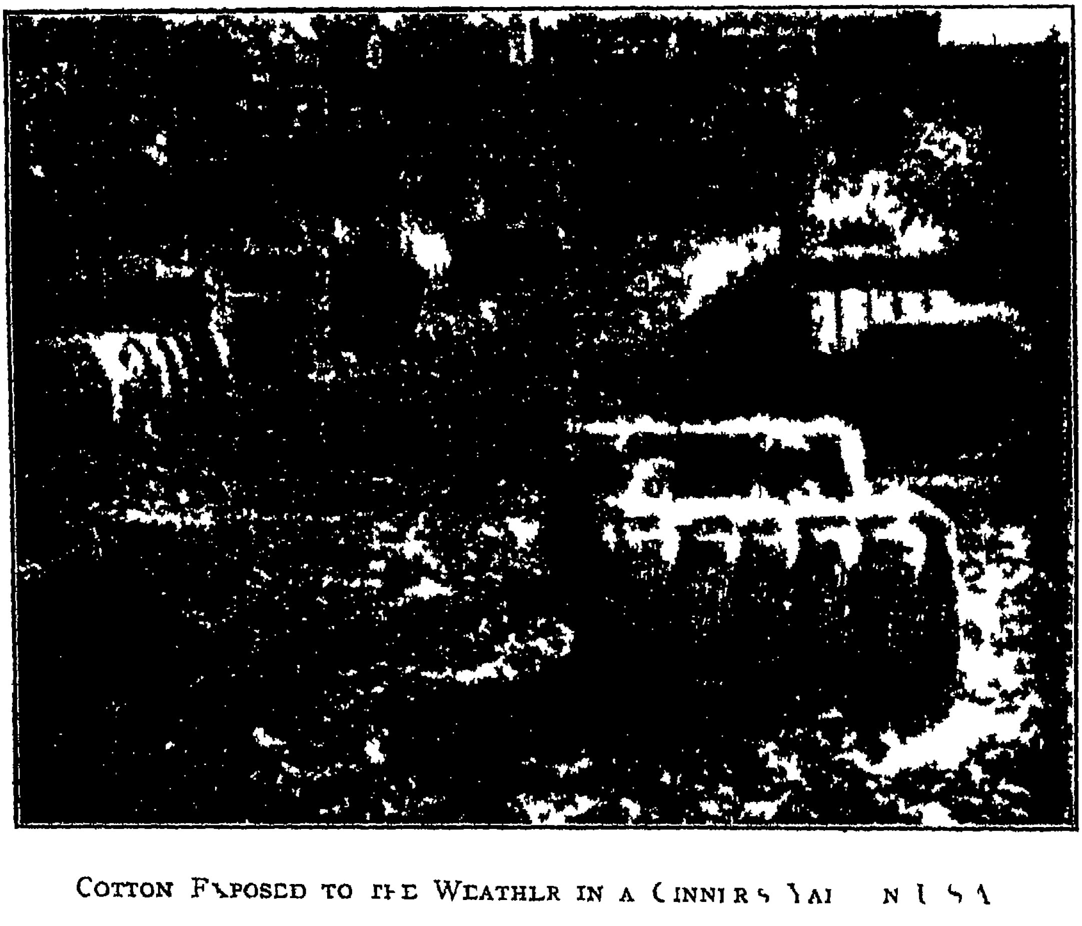
AVERAGE MOISTURE CONTENT OF AMERICAN COTTON ACCORDING TO STATES.

State	Average Moisture Content
Carolina (N & S.)	8·196
Texas	8·581
Louisiana	8·700
Mississippi	8·881
Alabama	9·297
Georgia	9·374
Oklahoma	9·500
Arkansas	9·521
Orleans	9·627

At a Meeting of the International Cotton Committee held last October the subject of a standard of moisture for American was under consideration and finally the following resolution was adopted

> Eight and a half per cent to be the standard regain for c.i.f. American cotton with a tolerance of 0.5 per cent [illegible] If the cotton contains less than 8 per cent of moisture the spinner shall pay the difference to the seller up to 8 per cent If the moisture content be more than 8.5 per cent the seller shall pay for the excess above 8.5 per cent

We have seen from the figures published in the foregoing tables that it is quite within the bounds of possibility to ship American cotton with roughly 8.5 per cent of moisture Presumably when the cotton leaves the United States it contains anything from ½ per cent to 1 per cent less moisture Why should the spinner pay for this



COTTON EXPOSED TO THE WEATHER IN A GINNER'S YARD IN U.S.A.

A common sight in any part of the Cotton Belt

much moisture absorbed during the voyage and during its warehousing in Europe? The spinner who receives damp cotton finds that his invisible loss has been exceptionally heavy for certain shipments and merely concludes that the cotton contained more leaf and trash than usual providing of course that he did not go to the trouble and expense of taking a moisture test He is not encouraged to take tests however for the European Cotton Exchanges refuse to recognise a scientific test and cling to the old fashioned method of laying one's hands upon the cotton Furthermore they insist that any dispute over the question of moisture must be settled by arbitration In this be useful if representatives of the Exchanges would ation upon the following points:—

oes the arbitration take place at the mill immediately the sample is drawn, or is the sample placed immediately after it is drawn, into a sealed canister and taken for arbitration to the Exchange?

The reason this question is asked is that a loose sample of damp cotton left exposed to the air, for even as short a period as 15 to 30 minutes, will lose a large degree of its moisture, and the purpose for which it was drawn would be entirely useless.

Is it reasonable to believe that an arbitrator can under all circumstances determine the exact amount of moisture in a given sample of cotton? For instance, there are days when it is hot and sultry and the hands may be moist and vice-versa. What is the objection of the Cotton Exchanges to a mechanical test? Science has advanced and improved its methods, but in regard to this question the Exchanges are acquiring the reputation of extreme conservatism and of retaining antiquated methods.

From the foregoing information it will be seen that this subject will not be solved in a day. The need exists, however, for a decided improvement in the situation of this question, and it appears to the writer that only through closer co-operation between the cotton shippers, merchants and spinners our difficulties are likely to be solved. It is therefore suggested that a Joint American Cotton Committee should be established on similar lines to that of the Joint Egyptian Cotton Committee. Representatives of the American Government, the Cotton Co-operative Associations, and the American Cotton Shippers' Associations could be invited to appoint delegates to meet representatives of the spinners at stated intervals. Such an opportunity is afforded at the Universal Cotton Standards Meeting in Washington every second year. The committee could also deal with other subjects besides moisture, namely, baling, false packing, improvement of varieties, etc. This suggestion has been made before, but in view of the expenditure likely to be incurred the scheme was abandoned. However, several spinner delegates already attend the Universal Standards Conference in Washington, and at slight extra expense a special meeting could be arranged to discuss this proposal with the United States Government officials, and others concerned.

GOVERNMENT COTTON ACREAGE PLAN.

Late reports from crop correspondents of the *American Cotton Crop Service* indicate that in all probability 10,000,000 to 12,000,000 acres of cotton will be ready to be taken out of production by July 12. The Government contract forms were late in being distributed, which has been the main factor in causing further extension of time to complete acreage reduction plans. The reports indicate that the chief opposition to destroying cotton acreage comes from the southern edge of the Belt, where harvesting is either under way or just about to get started. In this zone the growers claim that the crop is already "laid-by," and they have invested maximum sums per acre in cost of production, whereas in the northern half of the Belt a much smaller sum has been invested in crop production to date.

CROP AND MARKET REPORTS

Mr C T Revere of Messrs Munds Winslow & Potter, communicated the following interesting observations under date of July 1 1933 —

In view of the extraordinary complexities with which the cotton situation abounds it is impossible to express a categorical opinion on cotton or in fact any other commodity unaccompanied by reservation

The intrinsic factors in cotton if in fact they can be considered assertive are so deeply interwoven with other elements in the situation that it seems almost futile to call attention to them

Nevertheless a few items are worthy of consideration We have for example an unmistakable increase in consumptive demand In view of the acute under supply of finished cotton goods throughout the world the demand for cotton fabrics is bound to continue and to increase if we have the rise in purchasing power which we are justified in expecting

There is also justifiable basis for anticipating at least a temporary control of the production of American cotton Whether this is fundamentally wise is beside the point We are committed to this programme and advices from the South point strongly to the likelihood of a radical abandonment of acreage in some form or other It is to be hoped that the Department of Agriculture will insist on actual crop destruction unless it is resigned to make a farce of its grandiose schedule Certainly advices from the southern State agricultural commissioners and reports from meetings of farmers and business men suggest an acceptance of the Government offer that is far beyond earlier predictions

Turning to the economic aspects of the commodity situation we believe that general endorsement must be given to the price lifting programme of the Administration Both from a political and economic standpoint there are certain elements in the Administrative policies of the Roosevelt regime that rise to the height of executive genius The change in the public temperament from dread and depression to trustful hope is a transformation that is little short of miraculous There are plenty of misgivings over the ultimate outcome but as we have stated before we think it premature to pass hasty judgment on eventualities

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Messrs Weil Brothers Montgomery Alabama in their semi monthly crop letter, dated July 3 1933, write as follows —

The cotton crop enters the critical months of July and August well fortified to withstand future conditions Generally seasonal weather during the last half of June has been beneficial Temperatures have ranged from sub normal to very hot—but sufficiently warm and dry during the third week in June to properly carry the crop along and further develop a good tap root and a small but healthy plant During the past week temperatures in the Eastern Belt have been lower most sections receiving light to heavy showers and rains well timed and of much value The Western Belt has been hot and dry with showers and rains in some parts but not general In the North western part of the Belt the drought continues and rains are badly needed Although there are scattered reports of boll weevil they are not serious and no damage has resulted

Carolina conditions have been favourable with the crop ten days to two weeks late Georgia Alabama and South Mississippi have made particularly good progress the plant fruiting satisfactorily with fields well cultivated On an average the crops in these states are from one week to ten days late In the Central Belt and Oklahoma general rains are needed the plant here is small in size but of good colour and healthy Normal conditions prevail with the crop doing well in Southern Central Eastern and Northern Texas In West Texas which furnished a large part of the Texas crop last year the crop has made poor progress and is very backward temperatures have been extremely high with little rain

The acreage reduction plan of the Government appears to be receiving favourable co operation on the part of farmers and indications are for its pot cotton in the interior reaching the 10-cent level, e amount of cotton has changed hands; warehouse and stocks continue to be reduced with present totals much below last There continues to be a fair demand from mill centres.

The American Cotton Crop Service, Madison, Florida, communicate the following, under date of July 19, 1933:—

Correspondents' reports for the week ending July 17 indicate the condition of the crop just about held its own. In the eastern and central Belts rainfall stimulated growth of late-planted cotton, and a slight gain in condition was recorded. However, drought over large areas in Texas and Oklahoma caused condition to drop, which about offset rise in condition figures for other portions of the Belt. Condition for the Belt as a whole is still relatively high, but may be expected to decline unless copious rainfall is received over dry areas of the western half in the near future. In Texas and Oklahoma shedding, blooming in the top and premature opening were reported, due to excessive heat and drought conditions. In the central Belt the crop made average progress since the breaking of the long drought. Eastern Belt conditions have been materially improved by showers, but, unless high temperatures and sunshine occur in the near future, increase in weevil activity may offset the recent rainfall. Cotton harvesting is expected to begin in South Georgia areas during the current week.

Rainfall during the past week, with the exception of local rains during the last half over the north-western Belt, was confined largely to the eastern half of the Belt.

Temperatures were mostly above normal over the western half of Texas to near normal elsewhere in the western half of the Belt. In the eastern half of the Belt near normal to slightly below normal temperatures were reported. The weekly weather forecast is as follows :—

Central and East Gulf States : Partly cloudy, with local thunder showers in the latter half of the week, and near east Gulf coast at the beginning; temperatures near or somewhat above normal.

Southern Plains and West Gulf States : Partly cloudy, with local thunder showers in middle or latter part of the week. Temperatures near or above normal.

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EGYPTIAN COTTON

MAARAD COTTON.

Paper prepared for the International Cotton Congress, Prague and Carlsbad, June, 1933, *by FOUAD BEY ABAZA, Director, Royal Agricultural Society, Egypt.*

MAARAD is the longest fine-staple cotton in Egypt, and it is also the best-yielding of its kind. It has firmly established itself as one of our principal varieties, gaining favour not only amongst growers but also amongst users abroad.

Growers like it because it combines good yield and good price. In yield it easily beats Sakel by over 30 per cent., and ranks very favourably with any other long-staple variety in Egypt. It resists wilt very satisfactorily, a fungoid disease to which Sakel is highly susceptible. It suffers less than Sakel from the pink boll-worm, giving a cleaner cotton of comparatively higher grades. In ginning outturn it is also better than Sakel by 1.5 to 2 per cent.

Spinners like it because it has a good staple. It is a fine long regular cotton with a light-brownish white colour and excellent appearance. In some instances it is thought that its strength is not equal to the best Sakel. During the last few years, however, the cotton experts' and graders' opinion has been that Maarad is improving in strength every year, due no doubt to the effect of selection and acclimatization. Spinners' reports on Maarad strength proved conflicting at the beginning. Most of them, however, show that the strength of Maarad is equal to that of Sakel, especially when spun in the higher counts.

Liked by both growers and spinners, its acreage has steadily increased since it was first introduced by the Royal Agricultural Society in 1923.

Year	Area in feddans*	Total yield in 100 lbs (cantars)
1923	64	320
1924	477	2,147
1925	700	3,500
1926	4,524	19,002
1927	12,577	47,347
1928	11,176	50,000
1929	31,329	150,000
1930	68,727	309,879
1931	103,278	343,631
1932†	69,590	275,000
1933	100,000 estimate to end of March	400,000 estimate.

* A feddan is approximately one acre.

† Area under cotton restricted by law to quarter total area under cultivation.

The foregoing figures show that the supply of c
only been maintained but has considerably increased, an
every reason to believe that it will go on increasing in future.

Thanks to the efforts of the Technical Section of the Royal Agricultural Society, the cotton has kept its purity and its good characteristics. Continuous painstaking selection and breeding are undertaken year after year to prevent the deterioration of the cotton and to improve it in one character or another. Thorough and strict supervision is given both in the yield and in the ginning factory to prevent as far as possible any mixing of the seed used for sowing.

The Royal Agricultural Society keep the monopoly of the sale of the seed only. The trade in the lint, however, is quite free, and no restriction whatever exists in its marketing. The Society has not conceded any privileges or made arrangements with any body that might help to make an arbitrary fixing of the value of the cotton or to monopolize its sale.

Maarad has been tenderable against Sakel futures since the 1st November, 1932, at the maximum market differences of $1 per cantar between it and similar grades of Sakel, which differences are estimated by the committee of the Bourse of Minet El-Bassal. The following are the average prices for four grades of Maarad compared with Sakel during the season 1931-32:—

Grade*	Sakel	Maarad
Good Fair	−1¼	−1⅜
F G Fair	− 1/16	− ⅞
Good	+1⅝	+ ⅜
Fully Good	+5	+2¾

The average spot prices for similar grades of Maarad and Sakel for the last three years were as follows:—

Year ending December	Sakel Contracts tallaris	Fully Good Sakel tallaris	Fully Good Maarad tallaris	F G Fair Sakel tallaris	F G Fair Maarad tallaris
1930	23·68	+2·99	−0·42	+1·07	- 2·38
1931	14·21	+4·32	+1·07	−0·29	−1·09
1932	13·40	+4·87	+3·40	−0·11	−0·76

The differences fixed by the committee of the Bourse of Minet El-Bassal for the 24th March, 1933, and issued in the *Courier des Bourses*, were as follows:—

Grade		Sakel tallaris	Maarad tallaris	Sakel Contracts
Good Fair		−0·25	−0·60	12·90
F. G Fair Parité ..		+0·10	−0·40	
Good	+1·00	−1·25	+0·50	
Fully Good	+4·00	−4·50	+2·00	

The above figures illustrate clearly how Maarad has definitely established itself in our market. The wide disparity between it and Sakel did not last for long. This wide disparity was, however, necessary in the early years of the cotton; it encouraged spinners to buy it and to discover for themselves its intrinsic value. Exporters were also quick to exploit this argument

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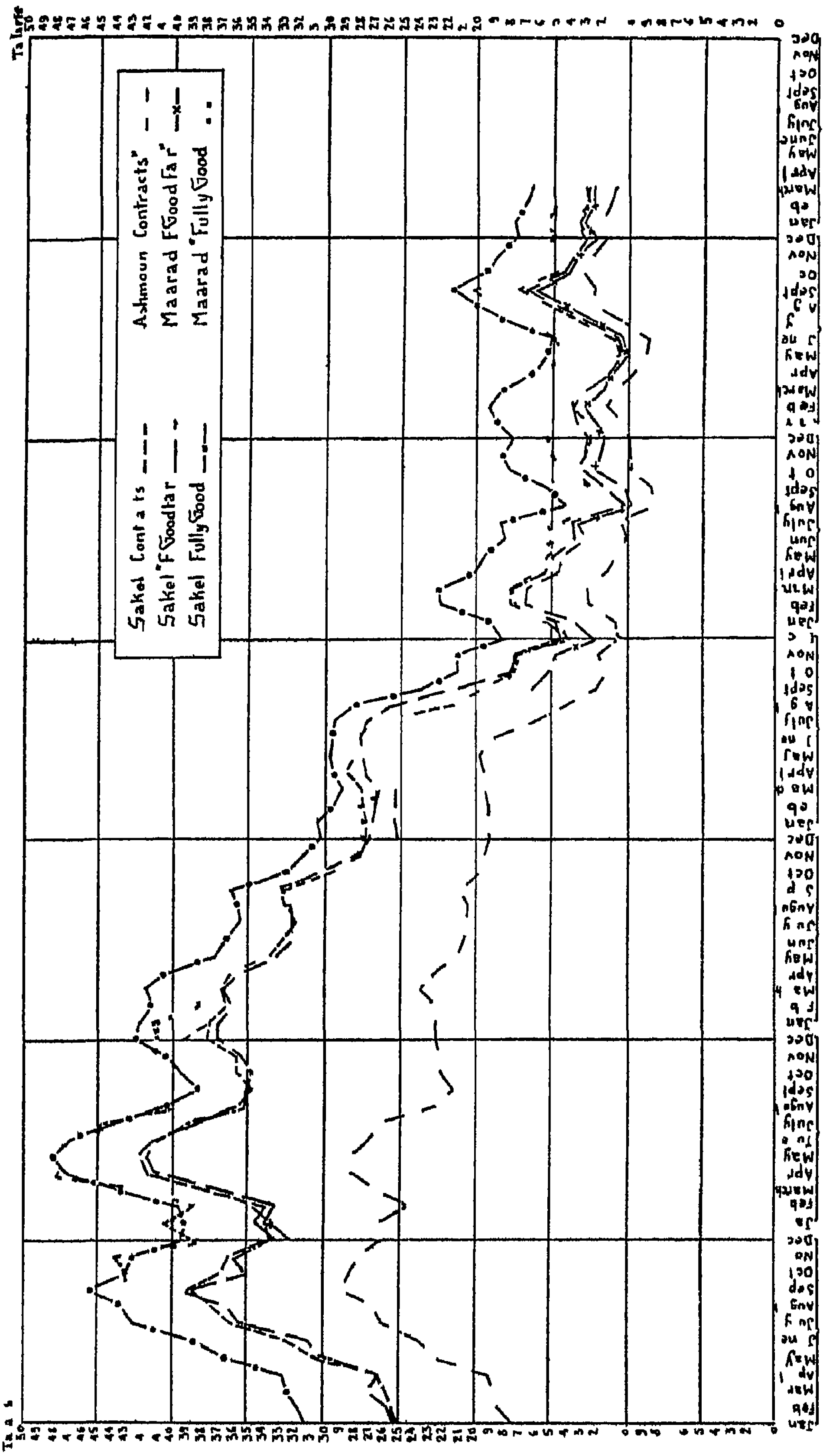
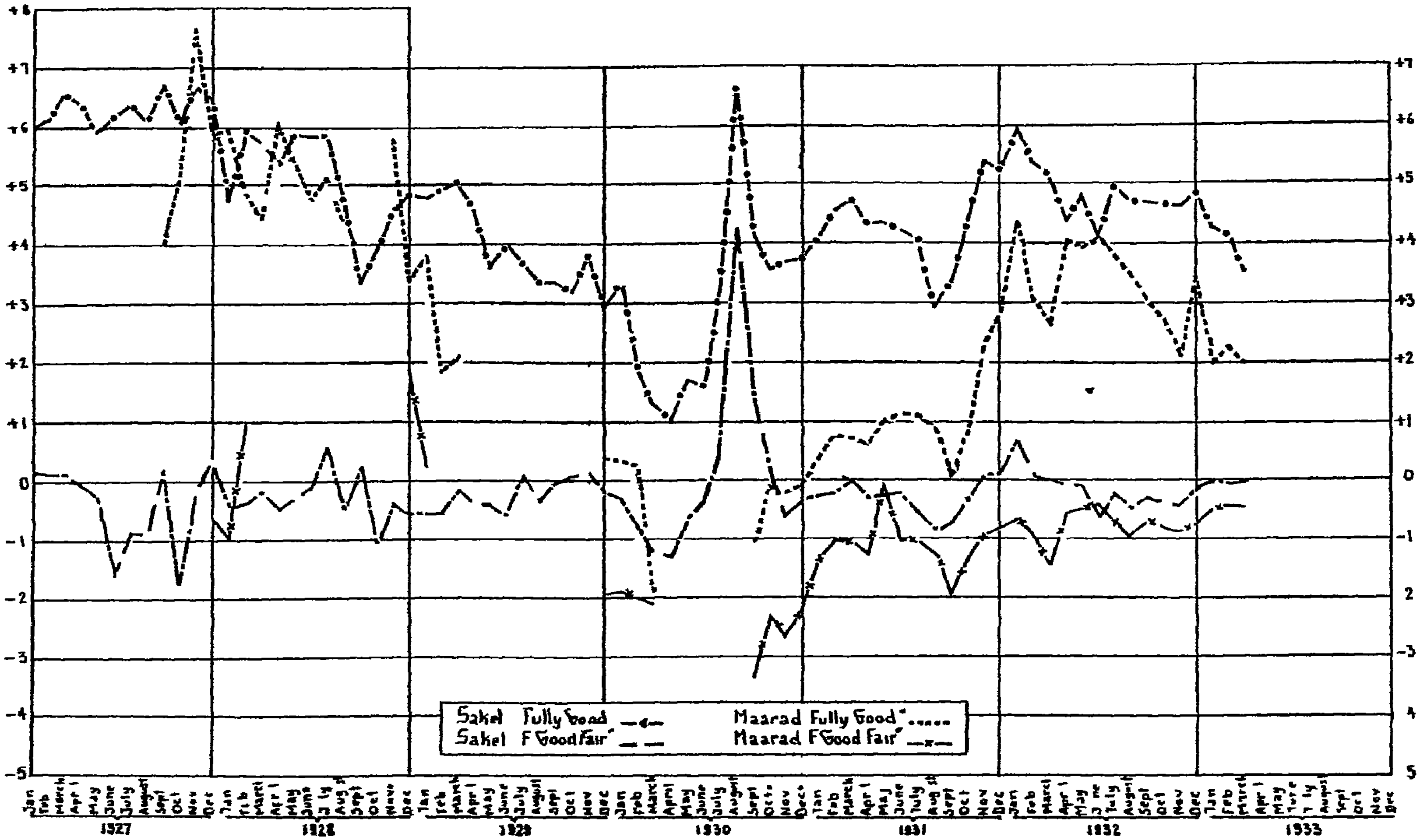
* From Egyptian Cotton Year Book, 1931–32.

MAARAD AND SAKEL—SPOT PRICE 1927-1933



MAARAD AND SAKEL—SPOT PRICE 1927-1933



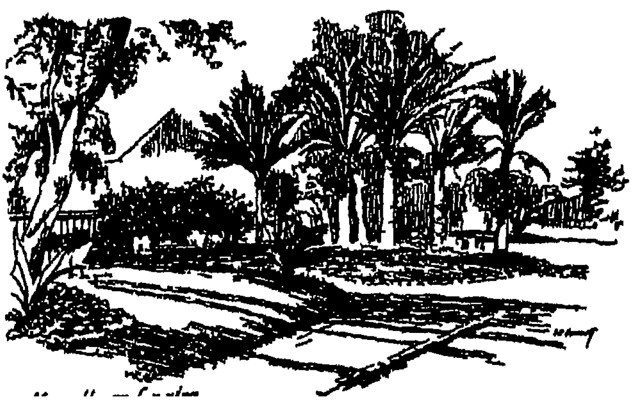
g the cotton amongst spinners This disparity, narrowed slightly, still maintained during the last two easons, the verage ranging from about 75 tallaris off for Fully Good Fair to about 3 tallaris off for Fully Good in 1931, and from about 50 off for Fully Good Fair to 1 50 tallaris off for Fully Good for the year ending December, 1932 This improving market for Maarad has been accompanied by a gradual improvement in the cotton from year to year While the staple has lost about two millimetres of its length it has gained considerably in strength and become slightly lighter in colour than it was before

Maarad cotton is now employed in almost every country Spinners in Lancashire who were at first reluctant to use it are now coming back to it The United Kingdom ranks fourth in consumption of Maarad cotton for the seasons 1930 31 and 1931 32, using 2 750 and 6,500 bales respectively

The principal users of Maarad amongst our foreign customers for the last two seasons are as follows —

	1931 32 Bales	1930 31 Bales
British India*	7 000	8 000
Japan	7 000	4 650
Switzerland	6 800	6 650
United Kingdom	6 500	2 750
France	2 000	1 450
Czecho Slovakia	1 750	1 120
Italy	1 000	200
Germany	1 000	1 400
Spain	900	450

The demand for cheap cotton and for low grades this year has naturally acted as a sort of setback for the expected large increase of area under Maarad this year It is realized, however, that such a state has set in because the world has become poorer and wants lower class goods We have good faith, nevertheless, that a good future still awaits Maarad, especially as the area this year is almost double that of last year



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* Egyptian Cotton Year Book 1931–32

Note on Giza 7 and Sakha 4 Cottons.

Paper prepared for the International Cotton Congress, Prague and Carlsbad, June, 1933, by HUSSEIN ENAN BEY, Director, Agronomic Section, Ministry of Agriculture, Cairo

EGYPTIAN cotton is famed for its quality, and for this reason it has attained a special standing in the world's cotton markets. There was a steady improvement in quality until Sakellaridis was introduced, after which a state of stability existed during the war years. It is due to the efforts of cotton breeders in Egypt that the quality has been revived in recent years.

Before the crisis, a new variety of cotton could only be adopted provided it was superior in quality to the standard varieties grown at the time, and provided also, and to a secondary extent, that its yield was within the limits of economic production on the part of the grower. The difference in prices, in pre-crisis years, between varieties, high quality and low or medium quality cottons, used to be so great that it allowed a big margin for yield. In other words, good quality cotton was what was wanted, and the better the quality the greater the profit. In late years, however, owing to the abnormal decline in prices, and the small difference existing between good and medium quality cottons, this rule has somewhat changed.

A series of trials conducted annually by the Egyptian Ministry of Agriculture since 1921 to compare the merits and monetary values of the different varieties of cotton grown in Egypt, show that Sakellaridis is no longer the most profitable, except where extra fine grades are produced (e.g., on State Domains Farms) which are sold at high prices. Such cases involve a very small proportion of the crop depending on the annual demand for special quality, which is at present very limited owing to the world's demand for cheaper goods.

Under these circumstances, a fixed cotton policy for mass production was approved by the Egyptian Government on the lines proposed in a report submitted by H.E. Ahmed Abdel Wahab Pacha, Under-Secretary of State, Ministry of Finance, and President of the Joint Egyptian Cotton Committee.

This policy involved the encouragement of growing high-yielding varieties without overlooking the quality. After the introduction of Sakellaridis the last word in quality seemed to have been said, though it is not generally known that within the last few years the original Sakel has been replaced by "310," which is this year in process of being replaced in its turn by another strain bred by the Botanical Section.

The reason for these replacements is that "310" has proved to be of better spinning quality than Sakel, while the new strain is very markedly better than either. The old name of Sakellaridis still remains, in order to avoid confusion in the market, a new name o a cotton produced by the Botanical Section only sufficiently different in several respects from other known eties.

Sakel, "310" and the new strain referred to are all similar in that both give only low yields.

In cotton-breeding in Egypt, quality must never be lost sight of, but yield is also an important factor, and in recent years of depression, as has been previously mentioned, it has assumed even greater importance. It is, in fact, a question now of the product of yield by price, i.e., it pays to produce a cotton which, though possibly even slightly inferior in price to Sakel, yet is sufficiently superior in yield to make it more profitable to the grower. Such a cotton has been produced by the Botanical Section, a short account of which follows:—

GIZA "*7*."

This variety originated from a single plant selection from a field of Ashmouni, at Fashn (Upper Egypt) in 1922, and was tested as a pure line selection up to 1926, when one-fifth of an acre was sown with it. Since then the rate of increase in production was as follows:—

Year	Area in Feddans	Total production in bales (775 lbs.)
1930	5,320	2,703
1931	34,710	13,553
1932	35,086	19,201
1933	50,000	28,000 approximate estimate.

In 1931 the demand for seed for sowing was so great that the Government was unable to cope completely with it. In 1932 the reverse was the case, as out of the quantity of seed available only a small proportion was sown, while in 1933 the demands for seed were greatly increased to such an extent that seed from the 1931 crop had to be bought in order to cope with the demand.

Such sudden changes in the demand for new varieties year after year are not at all uncommon, and it will be seen later that the same reverse took place in the case of Sakha 4. These changes are due to certain commercial and psychological considerations which are outside the scope of this note.

The yield, roughly speaking, is between 32 and 44 per cent. above the yield of Sakel, and may be equal to, or drop only to 4 per cent. lower than Ashmouni grown in the Delta.

Giza 7 is about the only cotton that thrives well at the two extremes of the country, inasmuch as it gives a yield nearly equal to Ashmouni in the far southern provinces, and is equally successful in the Delta, especially in the north.

The ginning outturn is 31 to 32 per cent. of the seed cotton, which is about 1 to 2 per cent. over that of Sakel, and about 7 or 8 per cent. lower than Ashmouni. It does, however, increase from 2 to 4 per cent. in the Delta.

As to grade, Giza 7 is only slightly inferior to Sakel in general, but the best qualities almost equal Sakel. In fineness and lustre it equals Sakel, but is slightly lighter in colour, while in length of staple it is one to two millimetres shorter than Sakel, and is completely immune from wilt Its outstanding c— from the spinning point of view is its high intrinsic strength it produces moderately fine twofolds which are equal in strength those made from Sakel, although the constituent single yarn is slightly weaker

Summing up, Giza 7 is a cotton that seems to meet the desire of both cultivators and spinners To the cultivator it is a high yielding variety, and to the spinner it is a comparatively cheap substitute for Sakel

SAKHA 4

The Sakel plantations were greatly menaced by the occurrence of the wilt disease in cotton In 1927 a strain of cotton was selected by the Botanical Section of the Ministry of Agriculture, and propagated under the name of Sakha 4 This strain is a long staple cotton of an average halo-length of 39 mms, as compared with Domains Sakel, which averages 36 5 mms This strain is not totally immune from wilt, yet, under severely infected field conditions, it was affected to a degree of 14 per cent only In the following years further selections were carried out under artificially infected conditions, and an almost totally immune strain was obtained which was only susceptible to an attack of 4 per cent in the worst infected fields Of these highly immune strains certain ones were selected and proved to be heavier yielders than the old Sakha 4 and equal in lint In the present year 220 acres of this new selection will be grown, which have greater immunity and a higher yield than the old Sakha 4

Last year (1932) there was a big demand for Sakha 4 It was sold at high prices, and on certain occasions it even fetched double the price of Sakel The cotton merchants were prepared to pay such high prices because of the attractive appearance of the lint, though they had been officially informed that its spinning quality was not quite as good as that of Sakel This year, early in the season, high prices were paid The demand for seed for sowing was great to begin with, but eventually dropped a great deal simply because the demand for the crop was restricted Sakha 4 is a cotton that should be substituted for Sakel in areas infected by wilt The yield may vary from 10 to 30 per cent over the yield of Sakel grown in the same localities, the difference being comparable to the degree of infection In lint, it is longer than Sakel, but not so strong

The following table gives the annual production of this crop —

Year	Area in acres	Production in bales
1930	796	378
1931	3 995	1 486
1932	17 955	8 528
1933	18 000	9 000 estimated

While the two varieties referred to above are the main subject of this note, it may be of interest to mention that another new variety produced by the Botanical Section, and which is still under test, bids fair to exceed even Giza 7 in yield, and almost to equal the new Domains Sakel in spinning quality

In conclusion, I wish to express my thanks to my colleagues in both the Botanical and Plant Protection Sections of this Ministry for their assistance in enabling me to compile this note

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Cotton Bagging in Place of Jute for Egyptian Cotton Bales.

Paper prepared for the International Cotton Congress at Prague, June, 1933, by ARNO S. PEARSE, Adviser to the International Cotton Federation and to the Missr Cotton Export Co., Alexandria.

ABOUT ten years ago the first complaints were raised by Lancashire fine spinners about the presence of jute fibres in Egyptian cotton. These complaints were rather of a vague nature, and the various authorities in Egypt which dealt with them replied that no change had taken place from the former method of packing employed, and argued that the complaint can only have arisen out of an exceptional case. But the spinners persisted in their complaints, and when they came to Egypt in 1927 for the International Cotton Congress, Mr. W. Heaps, the manager of Shaw, Jardine & Co. Ltd., Manchester, one of the mills belonging to the Fine Cotton Spinners' Association Ltd., which specializes on very high counts, found in his investigations that many jute fibres came off the bagging in the *country* bales, particularly when the jute bags were used for the first time. In consequence of this evidence some enquiries were made amongst the jute bagging manufacturers, but they merely stated that the lower the quality of the cloth the more liable would they be subject to this defect. Singeing was proposed but found too dear, the same reply was given when a rubberizing of the bags was suggested. The jute manufacturers blamed for the defect of their cloth the eternal desire to lower quality and to have a cheap article. Expenses were saved, but the reputation of Egyptian cotton suffered.

The low price of cotton and the desire to find new usages for cotton with a view to increasing consumption led in the U.S.A. to trials being made with cotton bagging for cotton bales. Various cloths were made, and the American Government tried them out by making shipments to Europe and back. These experiments suggested to Egyptian interested parties the use of cotton bagging for the bales, not so much for finding a new use but for preventing jute fibres from deteriorating the high class qualities of Egyptian cotton.

Manufacturers in England and on the Continent, as well as the Missr Cotton Spinning and Weaving Mill at Mehalla Kebir, and the Filature Nationale d'Egypte, Alexandria, Egypt, were asked to submit samples. When it was found that the extra cost of cotton bagging over jute was in the neighbourhood of 5s. per bale it was argued by many that neither the export trade nor the spinning industry could afford in these days of trade depression such a luxury as an "unnecessary" addition of expenditure of 5s. per bale, which is equivalent to an addition of only 0.08d. per pound; but represents the substantial sum of a quarter million pounds on the whole Egyptian crop. Alexandria shippers argued that finally this charge would have to be borne by Egypt.

One of our clients had given us an estimate of the number of ends "down" in the spinning room due solely to the presence of jute as being about 80 per cent. We undertook to send him, for the purpose of testing in a scientific way how many ends really do break in consequence of jute particles being present, a small quantity of bales handled in the field and in Alexandria, in the ordinary way, packed in jute bagging, and a like quantity of bales, the cotton of which had never come into contact with jute. In order to ensure that the quality of the cotton should be identical, we undertook to pick the cotton from alternate rows in the same field. A similar experiment was carried out by the State Domains

Meanwhile we convinced ourselves that loose jute fibres are really floating about in astounding quantities in the ginneries and wherever cotton comes into contact with jute. We found that a practice had originated in the ginneries of Egypt of sweeping frequently the floor with old jute bags; these are switched from side to side on the floor, and these bags become, of course, frayed, and every day inches of the jute cloth are in this way blown into the air in minute particles, and settle on the cotton and on the gins. An examination of the ginning machinery will show the presence of many jute fibres, for instance where the nails used in fastening the leather on the rollers occasionally become loose. Bits of jute sacking are used for cleaning the gins, and they become frayed, thus scattering again thousands of particles amongst the cotton. The presence of jute fibres can be detected with a magnifying glass any day in the mixing rooms at Alexandria

In order to show the seriousness of the complaint to interested parties in Egypt, not conversant with the process of spinning, it must be stated that the cotton is first passed in the mill through a number of machines for the purpose of opening it up and mixing it thoroughly and evenly. The cards, which are a kind of rotating steel brushes, lay the fibres parallel to each other and mix them still further, thus it comes about that when a small bit of jute string or cloth escapes the attention of the operatives it is being torn up into numerous small particles. Add to these the large number of jute fibres which the cotton has collected in its handling in Egypt and you have a very substantial quantity. Whenever a jute hair is mixed up with cotton and is drawn out by the spinning machinery a break of the yarn occurs and requires attention by the operatives. Or, if the yarn is not very fine, it may happen that a jute fibre slips through, but in that case the yarn will be weak at that spot and will probably break in the weaving process. In very rare cases the yarn with a jute defect may not even break in the weaving, but then it becomes all the more serious, because in the after-process of finishing, dyeing particularly, every one of these jute fibres is clearly visible and spoils the cloth, because jute does not take the dye or other ingredients in the same manner as cotton.

Whilst with American or Indian cottons the presence of jute fibres is not so serious, in our Egyptian cottons, which are mainly used for the very finest and delicate tissues, it is a very serious matter, and it behoves the exporters of Alexandria and the Government of Egypt to see to it that this very serious defect is remedied. As this proposed remedy adds a new use of cotton and employment in the Egyptian cotton mills, it is all the more desirable that it should be generally adopted throughout Egypt.

It would be no use to allow any small quantity of jute bagging to be used at all. In order to carry out the trial experiments as described we have had the greatest difficulty to prevent jute from coming somehow into contact with the cotton, and we know that some few jute fibres have come into the cotton in some inexplainable way in spite of our greatest care; probably these were jute fibres floating about in the atmosphere of the ginning factory. The method of handling cotton in the fields, in the gins and at the presses must be that *jute will be entirely excluded*, and legislation to this effect will become necessary. It is no use for a spinner to ask his Alexandria cotton shipper to pack his bales in cotton bagging at Alexandria. He buys his cotton mostly in Alexandria, but even if he buys it in the interior the main mischief has already been done. *Jute starts getting mixed with the cotton in the field during the picking, and at every subsequent stage more fibres are added.* First the cotton comes into contact with the jute aprons or bags of the pickers, then it is laid on the side of the field on strips of jute cloth, after that it is pushed into the long country jute bags. In that method many jute fibres are brushed into the cotton, especially when the cloth is new or very old. How the cotton takes up jute in the ginning has already been described. At the press in the ginning factory more jute fibres penetrate into the cotton. Finally, in the mixing room at Alexandria jute particles again float in order to remedy the evil a start must be made in the field and in the atmosphere and become deposited in the cotton. Therefore jute cloth must be prohibited to be used in any future stage.

Only when such legislation has been enacted and rigorously carried out will the user of Egyptian cotton be sure that his cotton is free from jute fibres. The spinner will save a great deal in the bill in cost, the operative will be more contented, and the yarn or cloth produced will be superior.

These advantages are bound to raise the reputation of Egyptian cotton, which is in a class by itself on a much higher plane than other kinds, and therefore it is the duty of everyone connected with its production to maintain and improve its reputation. Not only will the spinner have the advantages just alluded to, but he will also be able to use the bagging cloth in his own factory. In most cases he will be able to pass the cloth through a machine which will tear it up and enable him to use it as raw material for his low class goods, or at all events he will get from the cotton waste dealer a reasonable return.

We now come to the extra cost occasioned by the use of the cotton bagging. We made experiments with two qualities of cloth, one a closely woven thin sack cloth weighing 3 lbs per bale and the other a more open sack-clock of coarser counts of yarn weighing 5 lbs. per bale. The thinner cloth is not suitable for the rough handling in the interior.

We calculate the cost of thin cloth as P.T.12 per bag (2s. 6d.) that of the thick bag P.T.18 (3s. 7d.), whilst a jute bag costs only P.T.5 (1s.).

A jute bag can be used on an average three times in the interior (filling, carrying, opening for classifying, emptying). A cotton bag of the superior class six times, that of the inferior type twice only. The lower cotton cloth is cut by the iron hoops just the same as the jute cloth, whilst the superior cotton bagging stands the pressure of the iron hoops.

The inferior cotton bag is therefore not competitive, all the more as the heavy cloth will be worth much more as waste to the spinner.

The bagging used for making the export bales is the same cloth which has been employed in the interior. We estimate that the total *extra* expense per export bale from the first handling to the last will work out to about 5s. at the most. Economies in the manufacture of the cloth can no doubt be introduced as soon as the mills making the bagging know that there will be a steady demand for a particular type of construction of cloth.

In view of the advantages which the spinner will have, and these will be established in a very precise manner after these experimental bales reach the mills, he ought to be willing to allow the exporter in Alexandria to add per bale 5s. for packing. No doubt, in the course of time, due to existing keen competition of the Alexandria merchants, this extra cost, which after all does not come to one-tenth part of a penny per pound, will be borne by the shippers, but a readiness on the part of the spinning industry to pay part of the extra cost would facilitate the general *introduction* of cotton bagging and the necessary legislation.

Simultaneously with the necessary legislation to this effect there ought to be a regulation providing the use of cotton clothing, not coloured, for the workpeople in the gins and mixing rooms. It happens that bits of old clothing are thrown into the cotton, and if not detected in the opening-room of the spinning mill they cause severe damage, especially if that part of clothing was coloured, or consisted of jute sack-cloth, as is often the case. The workpeople in Egypt who handle the cotton should be made to wear cotton clothing, either bleached or grey.

Fear has been expressed that the quantity of low-class cotton required for baling the Egyptian cotton crop is not available in the country, but there need not exist any anxiety on this point. It is estimated that this new use would consume some 20,000 bales. This new demand might improve a little the demand and increase the price of these low-grade cottons, but this would be an advantage to Egypt; the main result will be a further appreciation of our high-class cottons, as they will produce a superior article, give less trouble to the operatives and enable them to attend to more machines.

The Development of the Rayon Industry and its Repercussions on the Products and Markets of the French Cotton Industry.

Paper prepared by Mr. R. A. de la BEAUMELLE, Manager, Syndicat Général de l'Industrie Cotonnière Française for the International Cotton Congress, Prague and Carlsbad, June, 1933.

AMONGST the other textile branches which are so seriously affected by the crisis, the rayon industry certainly seems to be showing the greatest amount of resistance, in spite of circumstances, its tendency to expansion as regards world consumption seems to be showing no signs of slackening off. This relatively privileged situation, coupled with the extremely rapid rise of rayon during the past few years, naturally leads one to enquire as to the degree to which this new fibre has gained its world position at the expense of the older staples.

It is this question which the Congress of the International Cotton Federation has placed on the agenda, restricting itself to the examination of the repercussions of the development of rayon on the products and the markets of the world cotton industry.

Even limited in this way, the question is important, since, in the measure in which the decline of the cotton industry can be imputed to the development of rayon, this decline presents the character, not of a simple, transient phenomenon, but of a permanent factor which will survive, even after the crisis has passed.

On the other hand, the question is all the more deserving of study, as at the first glance it seems extremely doubtful. In effect if the vogue for rayon is clamorous, and if the competition which it affords the other textiles, notably cotton, has often attracted attention, the part played by the new fibre in the world consumption of textiles (a part which is very important when compared with silk, 2.52 per cent. in weight, against 1.05 per cent.) is very small when compared with that of cotton (2.52 per cent., against 52.41 per cent.). This would seem at the outset to exclude the possibility of any very serious repercussions.

In the present report we have tried to reply briefly to the question put by the International Federation, speaking from the point of view of the French cotton industry.

I

ARTIFICIAL SILK (RAYON) AND THE PRODUCTS OF THE FRENCH COTTON INDUSTRY

As the wording of the question put by the Federation reads, we have to determine the effects of the development of the rayon industry not simply on the markets, but also on the products of the French cotton industry This latter point deserves to be examined carefully If it happens to turn out that the artificial silk gives to cotton manufacturers a new and important source of work, it will be necessary to deduce that the latter will thus regain, thanks to the manufacture of artificial silk or mixture fabrics, a portion of the activity that they have lost as far as pure cotton goods are concerned

Technically, cotton machinery is applicable to the working up of rayon, but to an unequal degree, according to the stage of manufacture in question Thus, spinning plants can only utilize rayon staple fibre, and it must be added that the plants specializing in American spinning are by no means as well-equipped for such a change over as are those specializing in Egyptian yarns Doublers, on the other hand, can use on their ordinary machines either the continuous type of rayon yarn or staple fibre As regards weaving, rayon can nowadays be used in the weft almost without any difficulties, and when certain adjustments are made, well equipped factories can use it just as successfully in the warp Beyond this, the weaving of rayon has not been exclusively reserved for ordinary looms, it is already being woven on automatics, and it is very likely that in the near future this type of manufacture will be developed until it can be carried out under conditions as satisfactory as those with ordinary looms

If, in weaving at least, the utilization of rayon is easy enough technically to the cotton industry, and if, in fact, the cotton industries of the United States, Germany, England and Italy and many other countries have largely taken up this type of manufacture, the French cotton industry is far from having used it to as large a degree * With a national production of artificial silk, which rose in 1932 to 23 million kg ,† the cotton industry of France consumed approximately 1 million kg , and if one adds to this a small quantity, difficult to estimate of staple fibre and waste this consumption can be put, as a maximum at 8 per cent of the consumption of rayon in France If, on the other hand, it is noted that in France the total weight of cotton fabrics and of yarns for purposes other than cotton weaving rose in 1932 approximately to 185 million kg it can be understood that the amount of rayon consumed by the French cotton manufacturers is relatively small This conclusion is confirmed by the insignificant importance of the cotton plant which is working on rayon, in spinning it as a matter of a relatively insignificant number of spindles in weaving, the number of looms weaving rayon the year round ‡ is negligible in certain of our cotton

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* This is probably due to the fact that the silk industry of France which is particularly important has endeavoured to turn a great portion of its energies towards the weaving of artificial silk and has made great strides in this direction Perhaps, also, it can be explained in a certain measure by the fact that most French cotton manufacturers sell in the grey to wholesalers, and are not in direct contact with the clientele which demands finished goods of 100 per cent rayon or mixtures

† Artificial silk is produced in France mainly from the viscose process (88 per cent of the total production)

‡ It is generally a case of mixtures, and more rarely of 100 per cent rayon goods

districts (Normandy), and may be estimated at 6 per cent in one of the districts which probably uses the greatest amount of rayon (Roanne Thizy), at 5 per cent in Alsace, and at only 2 5 per cent in the others (Vosges) Of course, these figures may be considerably increased if we took into account the number of looms which work on rayon intermittently, according to circumstances

We may definitely conclude, therefore, that the advent of rayon has brought no new activity of an appreciable character to the French cotton spinning industry, but that it has a growing interest for the latter, limited, certainly, at the moment, but the importance of which may increase indefinitely so far as the prices of rayon make it commercially advantageous for the cotton manufacturer to substitute rayon for cotton as his raw material *

II

RAYON AND THE MARKETS OF THE FRENCH COTTON INDUSTRY

In the competition between cotton and artificial silk it is essential to differentiate very carefully between two elements of very unequal significance the competition as regards yarns and the competition as regards fabrics

1 *Rayon Yarns* The three principal markets (and by this is meant avenues of consumption of French cotton yarns, be it single yarns or doubled, according to the strength of the competition of rayon, are the cotton weaving industry the hosiery industry and the silk weaving industry

The previous remarks on the subject of the employment of rayon in cotton weaving show that for the moment at least, the chemical fibre does not encroach a great deal on this territory In the 150 million kg of fabrics which the cotton-weaving industry produces in normal times, probably more than nine-tenths are manufactured from single yarn, that is to say, with yarns which whatever the count, are certainly cheaper than corresponding deniers of artificial silk†

It is no less true that throughout the years 1931 and 1932, we have seen the substitution of rayon in quite appreciable quantities estimated by some for the Vosges district alone at a minimum of 1 million kgs a year for weft yarns of 100's counts or those of 50's counts in the weaving of certain silk fabrics It is very difficult not only to weigh up the importance of such competition, but also to determine the durability of its effect for this type of manufacture is eminently subject to changes of fashion, and is even at this actual moment quite clearly on the decline It should, however be pointed out that in the case of certain articles the appearance of rayon has brought about among the clientele apparently definite changes in taste Thus certain fancy pure cotton dress fabrics (crêpes or boucle fabrics for example) which are to day supplanted by pure rayon fabrics were previously manufactured as extensively from single as from doubled yarns

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* See Annexe 1 the principal types of artificial silk goods, pure and mixtures, made by cotton-weaving establishments, and indicating their respective destinations

† See Annexe 2 giving in the form of a graph the prices of single cotton yarns and corresponding deniers of yarns from rayon The rayon denier represents 1 decigramme per 1 000 metres The denier 100 corresponds therefore to a rayon weighing 10 gr per 1 000 metres

Whatever may be the extent of the actual use of rayon in weaving, it must be emphasized that if the present relation of the prices, one to the other, happened to be modified so that, for instance, the cotton yarn increased substantially in price then the artificial silk yarn would be in a position to supplant the cotton yarn in weaving for, as regards a large number of articles, the technical qualities of the chemical thread are in no way inferior to those of the cotton In particular, if it does not now enter into the future calculations of those interested to substitute rayon for cotton in manufacturing household and toilet linen, yet table linen is even now made from a mixture of rayon and cotton Now it may be remarked that a profound modification of the relation between rayon and cotton prices is by no means unlikely Cotton prices are at present at a low level, and as the raw material represents a large proportion of the cost price of cotton yarns the price of the latter is liable to rise by a considerable margin This is not possible with the rayon yarns to anything like the same degree The raw materials used represent only a fraction of the cost price, and they may be replaced by others at any moment, according to chemical progress, and the substitutes may be cheaper and may make for more economical processing

In the hosiery industry, or in the weaving of silk, the competition of rayon has been very keenly felt hitherto It is essential to remember that more than three-quarters of the fabrics produced in the world are manufactured from yarns having from 20,000 to 120,000 m to the kilo Now, before the invention of rayon, cotton yarns were always by far the cheapest in this range, both as regards single yarn and the doubled variety The mercerising process could render cotton suitable not only for the manufacture of pure cotton fabrics with a smooth finish, but also for mixing on a large scale with wool and natural silk in the hosiery industry and in that of silk weaving The increasing popularity of rayon the improvement in its selling price, and technical progress which it has made, have made it a competitor of the doubled cotton yarn in almost every sphere of activity *

In this respect, the table reproduced in Annexe 2 is particularly instructive Three curves are shown there, giving the prices of single cotton yarn, doubled cotton and rayon yarns respectively These prices are indicated according to the number of 1,000-metres per kilo for cotton and according to the corresponding counts in deniers for rayon † It is clearly apparent from this table that, commencing with denier 225 downwards, the rayon yarns show, opposed to the corresponding doubled yarns (two ends), i e , those measuring 40,000 metres and more per kilo, a price advantage more

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* If we compare the artificial silk yarns made to-day with those made five or six years ago the progress as regards uniformity, strength suppleness, etc , is striking The head of British Celanese has recently announced the appearance in the near future of a rayon having the strength of natural silk and greater uniformity Besides this, the industry is at present able to produce dull lustre yarns which permit of their adaptation to the requirements of fashion

† See Annexe 2

and more marked as the yarn becomes finer,‡ and it goes without saying that this difference would be more noticeable if the diagram had included, not only yarns with two ends, but also those composed of more than two. It would have been even more marked if gassed and mercerised yarns had been included.

Such a price relation may well affect the employment of cotton in those two industries, which have been hitherto such large consumers of multiple cotton yarns—the hosiery industry and that of silk weaving.

In *hosiery*, without doubt, artificial silk has continuously developed at the expense of the luxury article, thanks to its increasing perfection. That is to say, it has ousted the natural silk yarn, but it has not driven out the cotton yarn from everyday articles. The importance of rayon in the hosiery industry varies a great deal according to the tastes of the clientele, and these themselves vary considerably. On the other hand, cotton frequently serves to reinforce the rayon, either in hose where a cotton thread is covered by a silk thread,* or for strengthening the foot, the toe, and for the suspender band. Rayon has definitely created a new demand in hosiery, and by reason of its fragility, this demand is one which frequently renews itself. It has permitted the attainment of tissues of great perfection as regards mesh, and an attractive appearance such as could not have been obtained with cotton except by the use of very expensive yarns in very fine counts. It is admitted that, in the district of Troyes, which is the most important region in France for hosiery, about 30 per cent. of the hose formerly made from cotton is now made from rayon, and there exist besides, notably at Huningue (Alsace), a number of hosiery factories employing rayon exclusively. As is customary in the hosiery trade, it is chiefly the 100-denier rayon which tends to compete with the French cotton yarns, 50/2 (French) and 60/2 (French).

In *silk weaving*, especially in the Lyons market, the progress of rayon at the expense of cotton has been even more marked. Rayon yarns have been substituted for doubled cotton yarns with 60,000 to 100,000 metres to the kilo almost wholly. These were previously used for linings; on the other hand, they have totally supplanted the 67/2 to 100/2† (French) yarns used in tie-making, and in the special fabrics made for the East. Amongst the great variety of articles made in Lyons, the only ones which still necessitate the employment of cotton yarns are certain velours, corset fabrics, and the fabrics for undergarments; even the latter have experienced the growing competition of dull lustre rayon during the past few months; in the case of undergarments it is generally a matter of non-ladder fabrics made on warp looms; these fabrics, which are expensive, were formerly produced in a natural silk together with a fine-combed Sakel yarn The demand for them has increased considerably owing to the abandonment of fine batistes and the adoption of knitted undergarments, etc A part of the clientele has acclaimed an article which at the same time is more attractive than cotton and cheaper than silk, which explains the advance made in two or three years by rayon in this branch, at the expense of cotton It must be added that, when it is a matter of goods for export, cotton is somewhat preferred by reason of the fact that it is less liable to taxation at the ports of foreign countries than are fabrics of rayon or rayon mixtures

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‡ Rayon, as is known, is sold in six qualities; 1st, 2nd, 3rd qualities, non-graded, stained, and damaged. The prices quoted on the graph are for the second quality, which is most in demand. It should always be remembered that artificial silk deniers under 100 do not interest the cotton trade. Thus, denier 50 is used in making crepe georgettes, in which it replaces natural silk, not cotton.

* A "vanisé" yarn is a cotton yarn covered by an artificial silk yarn.

† A yarn which has two ends doubled. No. 100 is a doubled yarn measuring 100,000 metres long, of singles yarns 500 grs. in weight.

But the competition of rayon with the doubled cotton yarn extends also to other domains In rayon braids the 150 denier yarns replace principally the 50/60/2 Upper Egyptian carded (gassed), in elastic braids the 200 and 300 deniers replace the 33/40, the 42/50 Upper Egyptian, Sakel, and even American, and the 600 deniers replace the 24/28/3 Upper Egyptian and Sakel (gassed) In the manufacture of ribbons the 150 denier, which is most commonly employed, replaces 50/60 and 42/50 Sakel and Upper Egyptian, in velvet for ribbons the 150 denier replaces the 50/60 Sakel and Upper Egyptian, whilst the 100 denier replaces the 76/90, the 84/100 and the 101/120 In elastic fabrics the 150, 200 and 300 deniers replace the 59/60, the 50/60, the 54/65 and the 33/40 Upper Egyptian, Sakel, and even American In velvet fabrics the 150 and 100 denier replace the 76/90 the 84/100 and the 100/120, as well as the singles Nos 36 and 40 formerly employed

Finally, artificial silk yarns have also been substituted to a certain extent for mercerised cotton twists (generally in the count 60/2) in the manufacturing of furnishing fabrics, however, as regards this class of articles, the competition of artificial silk has borne more heavily upon the natural silk waste than at the expense of cotton

To appreciate the importance to the French cotton yarn industry of these losses of market inflicted upon it by rayon, it is necessary to emphasize that by far the greater part of this competition makes itself felt in the case of fine Egyptian yarns of the French counts 30 s to 80 s affecting either the latter directly or the doubled yarns manufactured with them On the other hand, it must be pointed out that that part of the production of fine yarns of the latter counts, in which competition is most felt, consists of the production of the spindles of the spinners proper and of the spindles operating for the trade of those who are both spinners and weavers, for the latter class of manufacturing of Egyptian yarns usually avoid, through the use of artificial silk, competing with those spindles which feed their weaving mills Now this part, restricted in this manner, of the production of Egyptian yarns, which amounts at present to 5 or 6 million kgs for the Lille district alone, can be approximately estimated at some 10 million kgs for the whole of France, after having probably reached some 17 million kgs in 1929 It is practically certain that this enormous decline in production (7 million kgs) may be attributed to a great extent to the competition of artificial silk On the other hand, as far as the doubled Egyptian yarns are concerned, on which the competition principally bears, it is sufficiently striking to state that actually their total production in France probably does not absorb 4 million kgs of single yarn, as against a total production of artificial silk amounting to 23 million kgs It is thus manifest that the competition of rayon, in itself negligible if it is referred to the total production of all counts of French yarns, is of paramount importance when referred to the only branch which it really affects that of the fine counts

It is probable that we see there one of the main causes of the prolonged depression in the Egyptian section of the French cotton industry whilst alongside it the American section manufacturing the coarser counts has registered for a year past, if not real recovery, at least an appreciable increase in activity and a sensible diminution of short-time and stoppage

It must be added that this discovery is particularly serious for yarn of fine counts, for cotton-spinning machinery, as we have indicated above, is practically without recompense for the decrease in consumption by additional work in the manufacturing of staple fibre The artificial fibre cannot be manufactured at present for less than 12 or 13 francs per kilo, whilst the kilo of Sakel even augmented with the combing waste, is clearly lower

Besides this, cotton yarn of medium counts also suffers an indirect effect which must be considered this is the harm done to the fine counts by the competition of rayon Driven out of the market, as regards a great part of their manufactures, the French manufacturers of fine counts show a tendency to increase the amount of medium counts produced and to replace the manufacture of fine yarns by that of medium count Egyptian yarns, which to a certain extent, floods the market with this range

3 *Pure Rayon or Rayon Cotton Mixture Fabrics*

Fabrics of pure rayon or rayon cotton mixtures are, above all used as substitutes for cotton fabrics in linings for ladies' garments bedspreads lingerie and in dress materials

Unlike the situation as regards yarns it is not usually the price which determines the substitution of rayon fabrics for those of pure cotton

In linings for example, the twill satin made from pure cotton which was previously used cost 4 or 5 francs per metre, whereas it is replaced nowadays by rayon satin and by rayon crêpe de Chine costing 6 or 7 francs

As regards bedspreads, the heavy cotton satin of good quality has been replaced by rayon broche which not being thick has to be lined with a heavy cotton cambric, which makes the bedspread considerably more costly than before, while at the same time bringing about, perhaps, in this particular case, a consumption of Egyptian cotton yarn as large as before

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This proportion is only applicable in principle to doubled cotton yarns destined for uses other than the manufacture of sewing cotton It is known that owing to the lack of elasticity of rayon, and other technical difficulties the chemical fibre has not been successfully applied to the manufacture of sewing cotton and is only used in embroidery cottons for ladies' use Thus sewing cotton thread manufacture escapes almost wholly at present from the competition of rayon

For lingerie the beautiful nainsooks and cambrics, which cost to day 5 to 7 francs per metre, have been replaced by rayon crêpe de Chine, or by very beautiful fabrics of half-cotton half rayon at a price at least as high if not higher

As for dress materials, it is not possible to draw comparisons, but for these as for the others it remains true that in most cases the cost price of pure cotton fabric will be less by 20 or 30 per cent than the cost price of a corresponding article in rayon This is explained by the fact that most cotton fabrics concerned are manufactured from single yarns, that is to say from yarns actually cheaper than the corresponding deniers of rayon On the other hand, as regards the costs of weaving and of management, it is correct that the dyeing of rayon costs a little less than that of cotton To make up for this the weaving of rayon is more troublesome than that of cotton because of the fragility of the yarn

It is definitely, above all, the more luxurious and attractive appearance of rayon fabrics which has enabled them to supplant certain fabrics of pure cotton, but for many reasons it is unlikely that the competition which thus arises can do any serious harm to the cotton industry

In the first place, the difference in price which has just been mentioned imposes at present sufficiently narrow limits on this competition

Secondly, cloth made from pure cotton has its advantages its strength, its resistance to washing, its hygienic qualities, as far as fabrics for underwear are concerned It is just because of these advantages that rayon is replacing cotton only slowly for those types of fabrics which require frequent washing As regards net, and lace in particular, the use of rayon has diminished considerably as a result of disappointments caused either by washing or by the effects of perspiration on articles of underwear in the manufacture of which rayon net or lace had been used Cotton fabrics remain up to the present the most used for household goods

Finally, while considerations of price and wearing qualities would not prevent rayon fabrics from being substituted for cotton, the consequences will not be unfavourable for the industry, since, as pointed out above, there is no technical obstacle to the weaving of rayon in the factories previously used for cotton, On the contrary, the weavers of cotton could take advantage by substituting one manufacture for another

III

CONCLUSION

The conclusion that we must draw from this study is shown clearly, we think, in the preceding exposition

As far as the French Cotton industry is concerned, the progress of rayon has not, up to the present, really affected the consumption of yarns of coarse and medium counts, but, on the other hand, the fine counts have lost an important part of their market, this has given rise to a special source of uneasiness for this branch of the industry, and to stoppages independent of the actual economic crisis, a certain improvement can be brought about only by a reduction of the price of rayon waste in comparison with cotton, which would allow the spinners to replace their cotton by this artificial fibre

With regard to the French cotton-weaving industry, rayon has not caused any serious damage, on the contrary, it has supplied it with a new source of activity which, following the present relative prices of cotton and rayon, will perhaps lead to considerable development, and from this last point of view the progress of rayon must be considered rather as an element of security and a future resource for the weaving industry Nevertheless, it must be said that this element of security will be enjoyed, if the case arises, only at the expense of the spinning industry, since in increasing the manufacture of rayon articles, either pure or mixed, the weaving industry lessens *ipso facto* its consumption of cotton yarns

Finally, whether at present or whether in the future, it is the spinning branch of the cotton industry, and not the weaving section, which must be most seriously affected by the progress of the rayon industry

ANNEXE I

PRINCIPAL TYPES OF RAYON FABRICS (PURE OR MIXED) MADE IN FRENCH COTTON ESTABLISHMENTS

Silk fabrics (cotton warp, silk weft) Women's lingerie printed dresses for children

Silk fabrics (silk warp, cotton weft) Fabrics for dresses and costumes cheap lines for export

Satins (silk warp, cotton weft), serges and laces : Furnishings linings for men's wear export to Colonies

100 per cent rayon damasks, or those with cotton warp and rayon weft Ladies linings furnishings table linen

Vichy (warp of coloured cottons, weft of rayon) . Aprons shirtings

Serges (cotton warp, dyed rayon weft) Hat linings

Patterned fabrics Men's shirtings

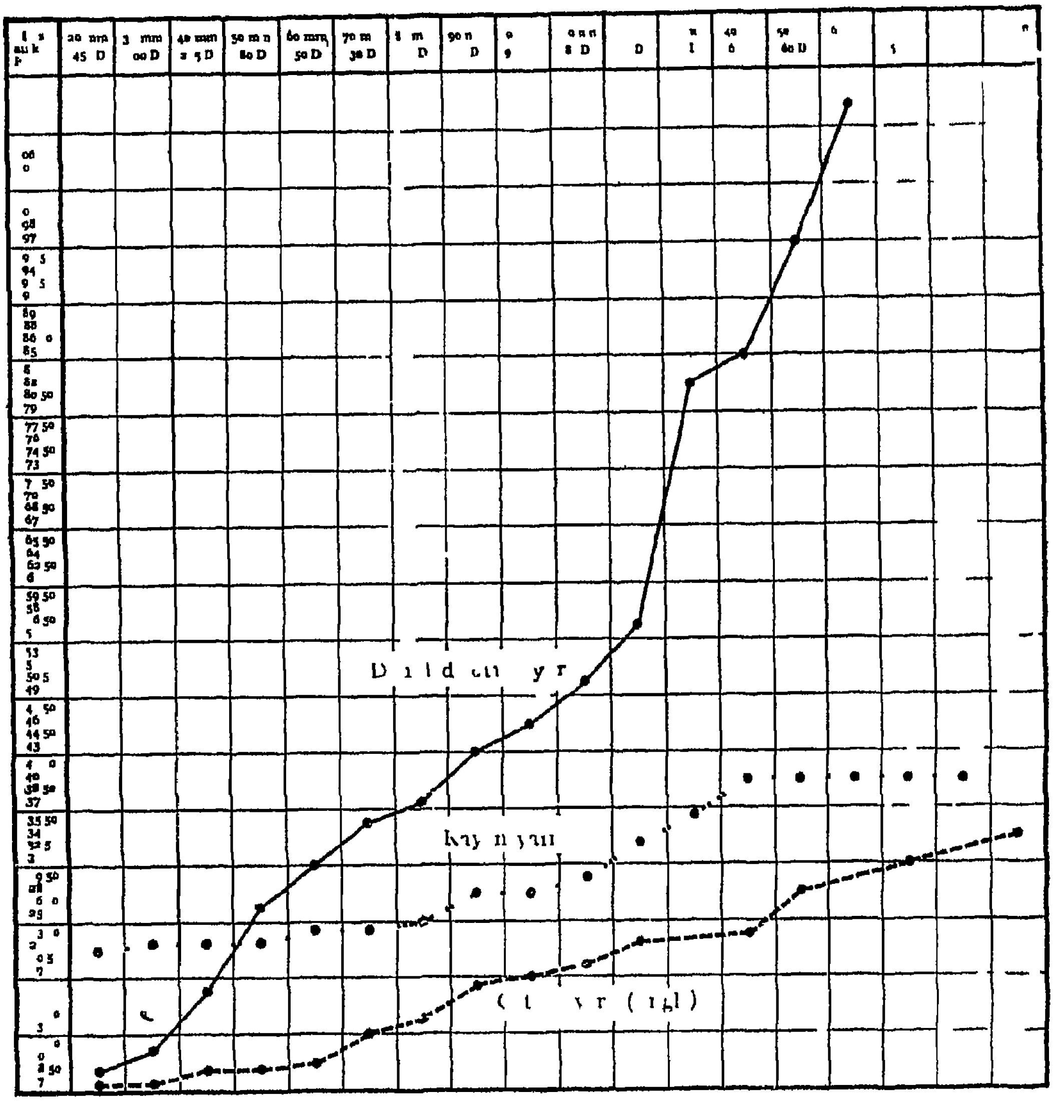
Tobralco type fabrics (cotton warp, artificial silk weft) Prints women's lingerie children's frocks

Voiles (all rayon) Furnishings prints

Artificial silk crepes (artificial silk warp, cotton crepe weft) : Lingerie cheap dresses cheap costumes

ANNEXE II

*Number of metres to the kilo
†Counts in corresponding deniers



Cotton Doubled ————

20/2 a 30/2 A C
30/2 a 40/2 A P
40/2 a 60/2 J P
60/2 a 160/2 J P S

actual price,
grey unmercerised

Single Cotton Yarn - - - - -

Same counts and same series
as the doubled yarns

Artificial Silk . .

Ordinary Viscose
to 120 deniers

Viscose super
100 deniers 5 and finer

N.B.—It is chiefly the general trend of the three curves of this graph which must be taken rather than the indications of price of the corresponding counts of cotton yarns. In one respect indeed the artificial silk denier competing with a given count of cotton yarn is not always the denier corresponding to that count mathematically. Further the artificial silk prices appearing in the graph are to be read [illegible] and when they are compared with those of cotton yarn used not in hosiery but in cotton or silk weaving it will be advisable to allow a certain margin for the cost of spooling, etc.

Result of a Special Enquiry Regarding Egyptian Cotton.

IN compliance with a request made by the Egyptian members of the Joint Egyptian Cotton Committee the International Cotton Federation has undertaken a special enquiry amongst the spinners of Egyptian cotton in the more important Egyptian cotton consuming countries with regard to the varieties of Egyptian cotton used

This information was desired with a view to ascertaining which of the Egyptian growths if any might with advantage be eliminated

The table overleaf is compiled from the actual returns received

The following are a few typical answers received from individual firms —

It may be difficult for the spinner to suggest which varieties should be eliminated We must presume that each variety possesses some virtue which finds favour in the opinion of the grower or spinner

It has been my opinion now for a period of fully seven years that there are too many varieties grown This causes the spinner to suspect that where small lots of experimental strains are not sold they are disposed of with lots which are grown in bulk We cannot forget the unpleasant experience we had several years ago when Pilion was so freely mixed with Sakel

It has been pointed out to us on our visits to Egypt that the rapid hybridisation which obtains in cotton growing is a very unfortunate circumstance I make substantial allowance for this difficulty

We are aware that the Agricultural Department must continue its research and cultivate new strains but it does appear that a little more care in marketing the product might be used

We carefully and minutely examine large parcels of cotton occasionally and are surprised at what we find

The trade may at any time be ready for the better varieties in large quantities There is evidence of this at present Whence is the cotton to come ?

The vagaries of fashion and the poverty of the world during the past three years in particular have caused a shrinkage in both the price and the consumption of the best cottons there is some indication as stated above of an increased demand Where is there a more suitable growth of cotton than Egyptian ?

One could go on writing and suggesting yet we must consider ourselves very fortunate when we remember that our requirements are very largely in the able hands of Dr W Lawrence Balls We have much confidence in him and hope to see a great improvement in Sakel cotton or another variety (equally as good) grown which will take its place

Firm with 163 000 spindles

Although we have classed our cottons under Sakel and Ashmouni we are inclined to think that a certain amount of mixing of varieties is going on even though the cotton may be called Sakel or Ashmouni We have found some sellers of cotton who are doubtful whether

CONSUMPTION OF THE VARIOUS EGYPTIAN VARIETIES BY COUNTRIES FOR HALF-YEAR ENDING JANUARY 31st, 1933

(In running bales)

Country	Sakel	Giza 7	Maarad	Sakha 4	Nahda	Pilion	Ash-mouni	Zagora	Casulli	Farouki	Fouadi	Giza 3	Other Varieties	Total
Great Britain (replies received from 9,816,550 spindles)	49,848	727	1,629	15	2,276	3,546	35,858	2,244	534	—	69	1,103	3 177	101,026*
Germany (replies received from 486,000 spindles)	2,012	61	422	—	678	3 318	11,746	9,412	34	—	491	—	4	28,178
Italy (replies received from 650,000 spindles)	8,100	29	—	—	—	370	20,250	1,500	—	90	70	—	600	31,000
Switzerland (replies received from 472,096 spindles)	2,947	7	2,914	26	133	552	5 521	1 060	32	—	129	22	1 356	14,819

* During the above period 143,000 bales of Egyptian cotton of *all* varieties were consumed by Great Britain

certain of their regular marks are Ashmouni or Zagora and Giza 7 seemed to be mixed in with Sakel. Firm with 50,000 spindles.

We have used considerable quantities of Nahda in previous periods. It is good and worth preservation but it has been too expensive recently.

We have also used considerable quantities of Casulli with satisfactory results but the supply has been too erratic in quantity. If supply and price were steady we should use it.

We have used a little Enouki and found it satisfactory. Experiments with Fouadi Fathi and Theodorou have not been satisfactory.

— —— Firm with 65,000 spindles.

Whilst we have been very limited in our use of varieties of Egyptian cotton, this is because we are only in a small way of business and it has not been convenient from a Card Room point of view to have more than two qualities going through at the same time. Nevertheless we are quite aware of the fact that Sakel and no doubt the various varieties of Ashmouni will show increasing signs of deterioration as time goes on and consequently it is very necessary that spinners should have the prospect of new growths coming forward to fill the gaps as older varieties drop out.

Under the circumstances we think the growers are justified in trying their skill to produce the right kind of fibre for the Egyptian cotton trade and to do so must mean the constant production and elimination process.

It appears to us that the growers should cut out all the growths of only medium improvement and concentrate on the ones most likely to prove good croppers and satisfactory with regard to their spinning qualities. Firm with 17,000 spindles.

Sakel cotton has recently deteriorated to a great extent and we have tested several new growths to establish whether or not they would be satisfactory substitutes. Taking into account both quality and price we have not yet found a cotton to replace Sakel and as a result we are still consuming Sakel. Giza 7 was the most promising cotton but its early promise has not been fulfilled.

—— Firm with 301,000 spindles.

In the corresponding period of 1930 we had 60,000 spindles using Ashmouni cotton.

During the second half of 1932 Ashmouni and all Upper Egyptian cotton has been dear compared with American and other growths.

Firm with 8,000 spindles.

The Low Sakel cottons have given every satisfaction in the use for which they were purchased. Another Spinner of Egyptian Cotton.

Other reports state that Soudan cotton in large quantities is being used instead of Egyptian.

The Syndicat Général de l'Industrie Cotonnière Française, France, following a communication with its members spinning Egyptian cotton, furnished the following observations:—

Early replies received point out that the varieties of Egyptian cotton which seem best to adapt themselves to the needs of the French spinner are those of Sakel, Maarad, Nahda and Uppers. If Maarad in particular were to have improved strength it might possibly replace Sakel, if not absolutely, at least in the main. Although Sakel has been improved, it is, as yet, far from the standard which it reached formerly, and, in our opinion, it would be to the interests of the spinners to obtain a further improvement in this variety.

No criticism has been raised regarding Uppers cotton, the quality of which appears to conform in every way to a large and varied number of requirements.

It may be gathered from the replies received that there is really no need to keep up the cultivation of Pilion and even of Fouadi.; the latter variety is easily superior to Pilion, but considering the unimportance of its crop it offers scarcely any interest and, moreover, the opinion has been expressed against the multiplicity of varieties by reason of hybridisation risks to neighbouring plantations containing superior qualities.

As to the new varieties such as Giza 7 and Sakha 4, they are not sufficiently well known to permit of an opinion being given. The size of their crop is too small to permit of a spinner following on satisfactorily with these varieties, but it is quite possible that they will become of interest as time goes on.

By reason of the comparatively small margin ruling at the moment between Sakel and Uppers, the intermediate varieties are only of very little interest and from the present point of view there will be no need to retain the varieties of average staple length. However, this situation may be modified in the future. It would not appear to be necessary to eliminate categorically the intermediate varieties, but it would certainly be desirable to limit them to one or two at the most. It should be understood, however, that Maarad is not placed in these intermediate varieties, because, on the contrary, it is estimated to be almost the equal of Sakel.

In conclusion, it would be as well to bear in mind that a variety longer and finer than Sakel, something to replace the now extinct long-staple Georgia and Florida varieties, might be cultivated with advantage in Egypt.

SWITZERLAND.

Three Swiss firms offer the following commentaries :—

(1) During recent years there has been no demand for Fathi (white Egyptian). The yarn made from this variety of cotton was very much desired by the highest class of knitting firms by reason of the fact that this yarn gave a pure white, soft, wool-like knitted fabric. The varieties produced at the present day cannot be used for these same requirements.

(2) The 30 bales fall under the category of Fathi, which is used to replace the earlier Abassi and white Egyptian varieties.

We are sorry to report that from year to year this growth has become more and more yellow. For this reason it will lose the high price and the interest which it formerly received from the consumers. It is to be regretted that Egypt has not produced a white variety for which very many uses could be found at competitive prices.

(3) We spin Egyptian cotton only when it is not dearer than the corresponding varieties of American cotton.

EGYPTIAN COTTON STATISTICS—SEASON 1932-1933.

SAKELLARIDIS.		Crs.	Crs.
Carried over at August 31, 1932		1,327,184	
Estimated crop, 1932		1,270,000	
			2,597,184
Less—			
Estimate Government stocks in Alexandria at August 31, 1933		300,000	
Local mill consumption		17,184	
	Crs.		
EXPORTS to June 1, 1933	1,370,800		
Estimate exports 3 months to end of August	443,200		
		1,820,000	
			2,137,184
Estimated market cotton to be carried over at August 31, 1933			460,000

ASHMOUNI AND ZAGORA			
Carried over at August 31, 1932		1,616,567	
Estimate crop, 1932		2,800,000	
			4,416,567
Less—			
Estimate Government stocks in Alexandria at August 31, 1933		85,000	
	Crs.		
EXPORTS to June 1, 1933	2,752,874		
Estimate exports 3 months to end of August	747,126		
		3,500,000	
Local mill consumption	241,567		
Mill earmarkings from Government stocks	300,000		
		541,567	
			4,126,567
Estimated market cotton to be carried over at August 31, 1933			290,000

ALL OTHER VARIETIES (including Scarto).			
Carried over at August 31, 1932		339,252	
Estimate crop, 1932		905,000	
			1,244,252
Less—			
Local mill consumption		1,252	
	Crs.		
EXPORTS to June 1, 1933	732,976		
Estimate exports 3 months to end of August	224,024		
		957,000	
			958,252
Estimated market carry-over of cotton at August 31, 1933			286,000

SUMMARY.	Crop	Exports	Stocks, 31/8/33 Government	Mill	Market
	Crs.	Crs.	Crs.	Crs.	Crs.
Sakels	1,270,000	1,820,000	300,000	—	460,000
Uppers	2,800,000	3,500,000	85,000	300,000	290,000
All other	905,000	957,000	—	—	286,000
Total	4,975,000	6,277,000	385,000	300,000	1,036,000

Total stock in Alexandria at August 31, 1933 1,721,000
All inclusive.

G. PILAVACHI and A. LAKAH.

EXPORTS OF EGYPTIAN COTTON.

	From September 1 to May 31			
	Season 1932–33	Season 1931–32	Season 1930–31	Season 1929–30
Peel & Co.	54,105	59,268	46,088	60,010
Carver Bros. & Co.	42,919	44,079	61,885	74,559
Soc Misr (ex-Lindemann)	41,639	62,281	19,869	37,361
Alexandria Commercial Co	39,062	58,460	40,861	46,396
Pinto & Co	33,245	34,962	9,614	16,905
Choremi, Benachi & Co	26,408	37,225	38,572	54,069
Reinhart & Co	23,593	39,217	37,632	31,317
Cicurel & Barda	23,335	26,200	41,190	28,047
Eg Prod. Trading Co	20,433	30,609	29,890	27,391
Salvago C M & Co	19,701	16,253	19,045	14,787
Planta & Co.	18 326	32,209	29,323	25,590
Anderson, Clayton & Co	17,278	25,776	20,592	22,408
Ah. A. Farghaly Bey	17,124	18,038	15,374	9,093
Fenderl & Co	16,837	26,408	16,294	12,967
British Eg Cotton Co	16,166	17,430	18,460	16,190
J. Rolo & Co	15,597	23,125	18,047	27,302
Alby Albert & Co	15,579	11,164	12,494	9,711
Kupper, H	15,042	18,728	17,480	16,302
Levy Rossano & Co	14,292	11,321	6,305	2,951
Soc Cot d'Egypte	13,670	12,844	10,765	11,203
Japan Cotton Trading Co	12,758	16,140	12,080	6,800
Escher, W.	12,691	18,625	11,725	11,954
Psomadelis & Co	12,500	12,135	10,063	6,066
Union Cotton Co of Alex	10,723	15,350	11,539	14,145
Eg. Cotton Ginners & Exporters	10,014	7,864	3,570	2,469
Gregusci & Co	9,015	10,562	13,164	14,622
Daniel Pasquinelli & Co	8,771	8,986	7,698	6,797
Getty, W , & Co.	8,553	15,233	11,855	11,001
Eastern Export & Co	8,435	12,905	11,248	12,112
Cotton Co	8,046	9,821	1,782	—
Engel, A , & Co	7,738	11,421	802	—
Aghion Riquez & Co	7,055	5,212	4,502	3,067
Francis Levy & Co	6,160	3,596	7,317	3,298
Anglo-Continental Cotton Co	5,758	6,714	10,077	6,438
Elia & Bibace	5,467	5,405	3,783	3,051
Zalzal, A	5,028	6,690	1,867	—
Cambas & Co.	4,170	4,837	3,803	4,355
Casulli, M S., & Co.	3,787	5,167	10,849	5,614
Comptoir Cotonnier d'Egypte	3,622	3,716	5,986	6,804
Hess, A , & Co	3,489	3,308	426	—
Rogers, E P , & Co.	3,451	3,401	1,091	—
Yazgi, A W	3,386	730	—	—
Joakimoglou, C. Z , & Co	3,209	4,026	5,342	2,699
Riches, Acheson & Co	3,016	—	—	—
Rodocanachi & Co	1,182	235	10	—
Moursi Bros	761	3,125	3,753	978
Banca Commerciale Italiana	251	—	—	—
Fr. Stabile & S. Salama	90	55	33	—
Divers	3,995	25,646	60,894	87,722
Total bales	657,472	826,592	725,939	754,551
Weight in Cantars, net	4,958,148	6,097,120	5,362,507	5,572,146

EGYPTIAN COTTON ACREAGE.

The Egyptian Ministry of Agriculture estimates the area under cotton this year at 1,804,209 feddans (about 1,200,000 acres), compared with 1,093,701 feddans (700,000 acres) in the previous year.

NEW CROP.

The following resume concerning the state and prospects of the crop during the first fortnight of July has been published by the Ministry of Agriculture —

Climatic conditions have been favourable to the rowing and maturing of the bolls

The water supply for irrigation has been sufficient

Pests —Cotton worm Egg masses of cotton worms appeared all over Egypt, an area of about 300 000 feddans being infested Hatching of eggs has been reported from various localities especially on late sown fields Damage done will probably be slightly more important than usual

Wilt Serious attacks are reported from some districts where Sakellaridis is planted in fertile soil

Aphis appeared in some districts of the Beheira and Assiout The attacks have been slight and could be overcome in most cases

Grasshoppers have made their appearance in some districts of the Beheira and of the Dakahlieh They have been destroyed by poison

Growing The growing of the bolls is making good progress In early sown fields of Upper Egypt they are starting to mature The opening of early matured bolls has been reported from some of the southern provinces of Upper Egypt In the southern districts of the Delta the formation of bolls is progressing favourably In the northern Delta flowering has become general in early sown fields Hoeing and manuring continued in late sown fields of the northern Delta

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COTTON STOCKS IN ALEXANDRIA.

The weekly bulletin of the Bourse de Minet-el-Bassal, dated July 21 last, contains the following statement:—

	Arrivals	COTTON EXPORTS England		Continent and other countries		U.S.A.		Total		Stock
	Cantars	Bales	Cantars	Bales	Cantars	Bales	Cantars	Bales	Cantars	Cantars
This week	4,288	5,962	43,732	9,368	69,193	710	5,205	16,040	118,130	2,472,288
Same week, 1932 .	3,175	8,006	22,300	6,685	49,667	384	2,822	10,074	74,789	3,851,289
„ 1931 .	96,852	10,230	75,208	14,489	106,949	820	6,091	25,539	188,248	4,636,257
Since 1st Sept, 1932 ..	4,924,136	276,788	2,035,417	465,584	3,448,666	33,807	250,868	776,269	5,734,951	—
Same period, 1931 ..	6,514,165	340,590	2,501,107	527,581	3,901,917	44,161	328,460	912,332	6,731,484	—
„ 1930 ..	7,490,587	266,249	1,959,586	569,745	4,215,399	16,450	136,316	852,444	6,311,301	—

In this stock of 2,472,288 cantars are included 1,079,302 cantars net of cotton belonging to the Egyptian Government, of which 371,910 cantars sold locally and 494,458 cantars sold abroad have not been withdrawn. The total amount of cotton unsold is composed of 137,469 cantars net of Sakel, 75,411 cantars net of Ashmouni-Zagora, and 54 cantars net of other varieties.

CROP REPORTS.

The following is the Commission de la Bourse de Minet-el-Bassal, Cotton Committee—Résumé of information received during June; by cable, dated Alexandria, July 4, 1933:—

Lower Egypt: Under influence of favourable temperature during June, crop regained portion of backwardness registered in previous months. Plants are in satisfactory state, but certain districts are still about ten days late in development. Flowering already begun in some districts. Egg masses of leaf-worm have been noted generally. Large landowners are taking energetic measures against them by hand-picking, but less enterprise shown by the small cultivator. It is too early to state exactly the amount of damage caused, but generally is not considered to be of much importance. Some cases of attacks of wilt have been reported. Water irrigation sufficient.

Upper Egypt and Fayoum: Temperature during month of June has been favourable to cotton plants, which continue to develop normally and are in satisfactory condition. In some regions attacks of leaf-worm have been noted, but no serious damage has been caused. Water irrigation has been sufficient.

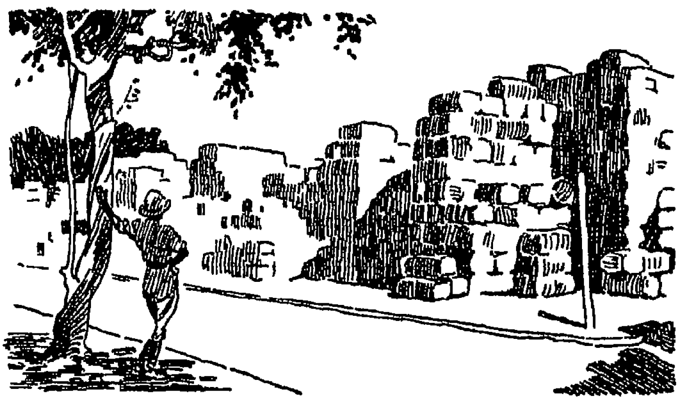
Messrs Alexandria Commercial Co. (S.A.) report as follows, under date of July 14, 1933:—

Ashmouni and Zagora: There is a shortage of cotton between Fully Good Fair and Fully Good Fair/Good, and, as a result, premiums are rising steadily. Export houses, tempted by the August-October difference, released a fair amount of cotton on the spot, otherwise buyers would have had great difficulty in fulfilling contracts. There is very little cotton below Good on offer, and premiums for all grades have advanced.

Sakellaridis: A moderate enquiry for good average staple cotton for stocking purposes, due to the July-November difference. A little business was done in the better grades at about last week's premiums.

Other Varieties: Here the bulk of the demand was for Maarad and Giza 7 in the better grades, Good and above. Other growths were neglected.

Crop, 1933: Reports continue, on the whole, to be of a satisfactory nature, but in Lower Egypt leaf-worm attack has caused some damage in a few districts.



East Indian Cotton.

India's Cotton Crop.

SUPPLEMENTARY MEMORANDUM ON THE COTTON CROP OF 1932-33 (ALL-INDIA).

This memorandum deals with the final estimates of the cotton crop, especially of Bombay, Madras and Hyderabad, and supplements the Final General Memoraundum on the crop issued on March 2, 1933.

FINAL ESTIMATE OF THE COTTON CROP OF INDIA

Provinces and States	1932–33 Provisional Estimates		1931–32 Final Figures*		1930–31 Final Figures*	
	Area 1,000 acres	Yield 1,000 bales	Area 1,000 acres	Yield 1,000 bales	Area 1,000 acres	Yield 1,000 bales
Bombay†	6,587	1,457	6,462	1,301	6,296	1,277
Central Prov. and Berar	4,216	740	4,620	460	4,750	1,136
Punjab†	2,268	652	2,541	615	2,489	767
Madras†	1,976	412	2,228	424	2,071	381
United Provinces† .	527	170	753	207	845	324
Burma	320	62	228	34	373	87
Bengal†	76	24	75	17	77	19
Bihar and Orissa‡ .	65	13	68	14	69	14
Assam	37	15	37	15	41	15
Ajmer-Merwara ..	33	11	27	11	31	11
N.W. Frontier Province	16	3	18	4	13	3
Delhi	2	1	4	2	4	1
Hyderabad	3,602	534	3,644	509	3,527	651
Central India . ..	1,007	135	1,172	129	1,284	214
Baroda .. .	722	144	693	136	731	140
Gwalior .	597	76	632	76	619	103
Rajputana	419	57	437	62	520	73
Mysore	88	10	83	9	72	10
Total	22,558	4,516	23,722	4,025	23,812	5,226

NOTE.—A bale contains 400 lbs. of cleaned cotton.

* These are revised estimates as finally adjusted by provincial authorities.

† Including Indian States.

‡ Excluding certain Feudatory States which report an area of 28,000 acres with a yield of 8,000 bales, as against 29,000 acres and 7,000 bales last year.

FURTHERING THE USE OF INDIAN COTTON IN LANCASHIRE.

The Indian Cotton Inquiry Committee, set up by the Government under the Ottawa agreements to explore the possibility of using more Indian cotton in this country made its first report to Manchester business men at a meeting of the Manchester Chamber of Commerce recently held in Manchester Mr Richard Bond, President of the Chamber, presided, and Sir Richard Jackson, chairman of the Committee, explained the work so far undertaken in the course of the inquiry

Yarn has been spun up to 44 s twist and up to 60's weft and over eighty fabrics were exhibited The range of cloths is wide and extends from coarse grey sheetings to fine twills It includes grey shirtings cabots, poplins, repps, drills, weft satteens, reversible satin stripes, satin stripe tussores various types of plain and figured casements dobby and jacquard woven tablecloths etc

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Blow-room Treatment for a Long-staple Cotton.

By NAZIR AHMAD, Director, Technological Laboratory of the Indian Central Cotton Committee

THE importance of giving proper blow-room treatment to a cotton has recently been discussed in a Technological Leaflet (No 3) which contained the results of spinning tests on samples of a leafy cotton These tests were made in order to see how far intensified blow-room treatment could rid the cotton of its leafiness, and what effect, if any, such treatment had on its spinning performance and the tensile strength of its yarns The present leaflet embodies the results of spinning tests on samples of Sudan Sakel cotton, in which the blow-room treatment was varied with a view to finding out which particular treatment is best suited to a cotton possessing a fine and long (1¼-in) staple

The processing of staple cottons, especially in the blow-room, presents certain features which are peculiar to them Being generally cleaner, these do not require the same intensive treatment as the coarser types, particularly in machines in which cleaning is effected by the action of beaters Furthermore, their long and delicate staple is liable to greater injury if the number of machines employed exceeds the minimum requirements, and the choice of speeds and settings in these machines is not correct At the same time, however mild the treatment, it must be such that the bulk of the impurities present in the cotton are removed by it The essential point, therefore, is to employ such a blow room treatment which, while effectively cleaning a staple cotton, should not lower its spinning performance This exactly was the object with which the tests described in this leaflet were made on samples of Sudan Sakel cotton supplied by an Ahmedabad mill

It will be seen from column 5 of the table that the blow-room loss diminished progressively as the treatment became mild The absolute values of the losses and the differences between them are small, as the cotton had been picked in a clean condition It will be further seen that the card room loss, which is fairly high for this cotton, is more for the two lots which received milder treatment in the blow room than for lot 1 This must be due to the fact that some of the impurities which evaded the mild blow room treatment were ultimately held up and removed by the card In the case of lot 2, which gave the highest card-room loss, probably the additional factor operated that the particular treatment given to it was most suitable for presenting it to the cleaning action of the card

Yarn breakages in the ring frame were high only in the 60's and 80's counts of lot 1, which had received the severest blow-room treatment On the whole, they were fewer for lot 2 than for lot 3

Yarns spun from the three lots show some very interesting features It will be seen from column 23 of the table that, as the blow room treatment became mild, yarn neppiness increased progressively This is a surprising result in view of the statement made above that with the two mild blow-room treatments more waste was removed by the card This, on the generally accepted views should have helped to reduce and not to increase yarn neppiness It is highly probable that the mild treatment given to lots 2 and 3 failed to open the cotton fully, so that tiny clusters of fibre managed to pass through and, later, served as nuclei for the neps This tentative explanation is strengthened by observed fact that neppiness was worst in yarns spun from the lot which received the mildest treatment However, if these fibre clusters persisted in lots 2 and 3, their effect is not noticeable in any other yarn characteristic besides neppiness It will be seen from column 22 that, count for count, yarns spun from lots 2 and 3, which received mild treatments are more even than those obtained from lot 1 Furthermore, although the lea-breaking strength of yarns spun from lot 3 is not so high in two counts as that of lot 1 yarns, the lea strength of yarns obtained from lot 2 is highest in each of the three counts in spite of the fact that its yarns were tested at lower humidities The single thread test results for yarns generally follow the lea test except that the differences in the values for lot 1 and lot 2 are much smaller Taking the results of both tests into consideration, it is clear that yarns improve in strength at first as the blow-room treatment is made mild, but become weak if the treatment is made milder still There is thus an optimum treatment which gives the strongest and the most even yarns

To sum up, making the blow-room treatment mild (only one passage through the Crighton opener and the scutcher) slightly reduced the blow room loss but increased the card loss and made the yarns stronger and more even but neppy Making the blow-room treatment milder still (the same number of passages as above but

SPINNING TEST RESULTS FOR SUDAN SAKEL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
				WASTE PERCENTAGES				RING FRAME PARTICULARS*					YARN TEST RESULTS										
													LEA			SINGLE THREAD							
Sample No	Date of Spinning	Lot No	Weight of Sample lbs	Blow Room Loss	Card Room Loss	Spinning Loss	Total Loss	Yarn Breakages per 100 spindles per hour	Front Roller Speed R P M	Draft	Turns per inch	Counts Nominal	Counts Actual	Strength lbs	Count Strength Product	Counts Actual	Strength ozs	Irregularity %	Weakness Percentage	Extension %	Evenness Class	Neps per yard	Turns per Inch Actual
1895/1	16-7-32	Lot 1	10	3.8	11.8	0.6	15.2	6	140	7.79	23.79	40s	40.2	55.7	2239	40.2	8.1	11.4	0	7.2	3	1.0	23.1
1895/1	25-7-32			—	—	—	—	64	117	9.04	28.92	60s	58.6	35.1	2057	58.4	5.2	16.1	4.0	6.6	4	1.2	28.1
1895/1	25-7-32			—	—	—	—	86	100	12.29	33.44	90s	78.7	25.0	1968	80.4	3.4	19.4	9.0	5.6	5	1.5	32.3
1409/1	10-8-32	Lot 2	10	2.8	15.[illegible]	0.5	18.0	29	147	6.97	23.79	40s	42.0	55.2	2318	42.6	7.7	15.5	5.0	6.4	2	3.2	23.1
1409/1	11-8-32			—	—	—	—	12	117	8.57	28.92	60s	61.0	38.3	2336	60.8	5.2	15.7	8.0	5.6	3	3.2	28.3
1409/1	11-8-32			—	—	—	—	14	100	11.46	33.44	80s	81.8	24.2	1980	82.9	3.3	20.1	7.0	4.8	4	4.0	32.5
1409/2	10-8-32	Lot 3	10	2.5	13.8	0.4	16.2	34	147	6.63	23.79	40s	42.1	48.0	2021	41.3	7.5	13.5	5.0	6.0	2	5.0	23.1
1409/2	11-8-32			—	—	—	—	9	117	8.23	28.92	60s	62.0	35.2	2182	61.1	4.9	14.0	12.0	5.5	3	4.5	27.5
1409/2	11-8-32			—	—	—	—	18	100	10.91	33.44	80s	80.6	20.8	1676	79.7	3.4	19.5	10.0	5.0	4	4.0	32.3

* The ring frame front roller used in the spinning of these yarns has a diameter ⅞ inch

the Crighton beater speed reduced from 750 r p m to 550 r p m) further reduced the blow-room loss, but made the yarns weak and neppier still, though it did not affect their evenness adversely On the whole, therefore, the treatment given to lot 2 was found to be the optimum treatment for this cotton, as it resulted in yarns possessing the highest strength and evenness

The increased neppiness of yarns, in spite of the higher card loss with the two mild blow room treatments, is an anomalous feature Most probably it is due to small clusters of fibres which the mild treatment was not able to disentangle completely and which served as nuclei for the formation of neps

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A survey of the import trade of India for the fiscal year, April 1, 1932, to March 31, 1933, by H M Senior Trade Commissioner in India, states —

Cotton Yarns The total imports rose from 31 575,100 lbs to 45,103,382 lbs The United Kingdom share increased from 11,912,546 lbs to 13,357,065 lbs A remarkable increase in the imports from Japan from 6,206,197 lbs to 18,148,809 lbs is to be recorded The imports from China rose in quantity from 13,215,238 lbs to 13,325,400 lbs

Grey Piece Goods (unbleached) The imports in 1931-32 amounted to 249 4 million yards and in 1932-33 to 356 0 million yards Notwithstanding this increase, the total imports are still below the figures for 1930-31 The United Kingdom share advanced from 59 7 million yards to 111 1 million yards Arrivals from Japan, however, rose from 185 2 million yards to 244 million yards The imports from China fell from 3 9 million yards to 68 million yards

White Piece Goods (bleached) A satisfactory expansion is to be recorded in the total trade from 279 7 million yards to 412 7 million yards The United Kingdom share rose from 207 0 million yards to 281 million yards, that of Japan, however,

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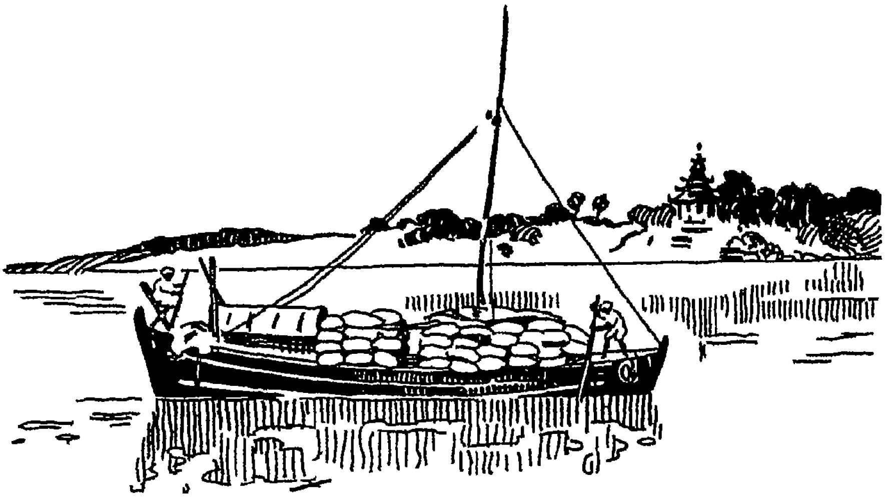
advanced in still greater proportion from 59 8 million yards to 120 4 million yards Arrivals from Switzerland rose from 5 9 million yards to 6 5 million yards Shipments from Holland were reduced from 3 5 million yards to 2 2 million yards Japanese shippers are making a determined bid for the trade in white shirtings, nainsooks and mulls

Coloured Printed or Dyed Piece Goods There has been a noteworthy advance in the total trade from 223 2 million yards to 424 8 million yards The British share rose from 110 3 million yards to 194 3 million yards Arrivals from Japan also advanced from 94 6 million yards to 214 2 million yards Imports from Switzerland rose from 1 6 million yards to 3 3 million yards, while those from Italy shrank from 9 9 million yards to 7 2 million yards

Fents After a long period of depression the total imports again expanded from 23 3 million yards to 31 7 million yards The imports from the United Kingdom rose from 6 5 million yards to 10 7 million yards and those from the U S A from 16 4 million yards to 19 4 million yards

Cotton Sewing Thread There was a slight increase in the total trade from 1,870,740 lbs to 2,072,933 lbs Imports from the United Kingdom advanced from 1,626,791 lbs to 1,793,707 lbs Those from all other countries rose from 243,949 lbs to 279,226 lbs

Artificial Silk Yarn On account of the expansion in the Indian textile industry, the total imports advanced from 7,962,546 lbs to 11,002,003 lbs Italy was the principal supplier, the imports from whence rising from 3,899,354 lbs to 5,608,756 lbs Imports from the United Kingdom rose from 990,066 lbs to 1,656,450 lbs Imports from Japan rose from 436,045 lbs to 1,798,903 lbs Those from the Netherlands were reduced from 1,003,088 lbs to 847,160 lbs, and those from France from 727,424 lbs to 360,129 lbs



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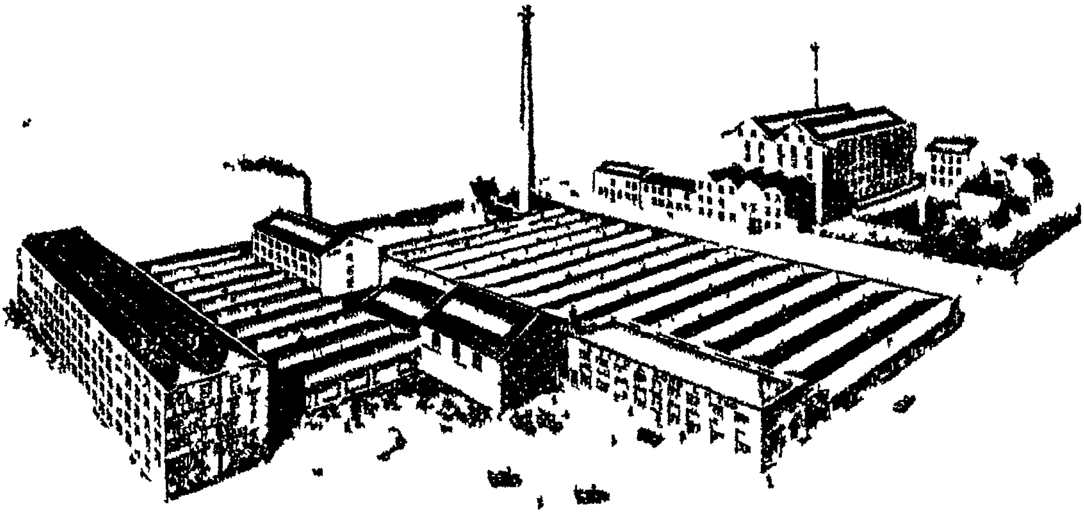

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Determination of the Combing Value of Cotton Yarns.

By KARL KÜSEBAUCH,

Communication of the Textilforschungs-und Konditionieranstalt Reichenberg,

WITH woollen combed and carded yarns we have in Sieber's method a rapid and trustworthy means of differentiation. With the help of a knife small 1–1½ mm lengths of thread are allowed to fall on to a plate below. If the bundle of fibres is thereby scattered, then the yarn was combed, if the fibre bundle remains whole, then the yarn was carded.

Conditions are otherwise however, when we wish to test cotton yarns, on account of the almost similar spinning process for both carded and combed yarns. With cotton combing has as its object the freeing of the yarn from impurities, the arrangement of the fibres in parallel lines, and the elimination of the shorter portions of fibre. Staple diagrams explain the distribution (division) of the individual fibre lengths in a yarn. The staple diagrams of yarns for this investigation were obtained by Sieber's Counting and Measurement Method and the values obtained by it. The fibres were carefully drawn one after the other out of the fibre bundle, laid on a glass plate covered with a thin layer from a solution of gum arabic in glycerine, arranged straight by means of the preparation needle, measured as to their length by means of the graduations engraved underneath the plate, and the requisite values subsequently calculated therefrom. From the values so found are reckoned the standard deviation, the variability index, the dispersion, the fibre length extension. It is now possible to obtain a coefficient for the combing value, v_u, calculated from the quotient of the standard deviation of the values which lie under the mean, s_u times 100, and the principal mean staple l_m.

Thus, $$v_u = \frac{s_u \times 100}{l_m}$$

With the yarns tested by us, the combing value amounted to about 40 at the limit of the combed, and with only carded yarn v_u. If the combing value of a yarn exceeds the number 40 then v_u is over 40 and we have an uncombed, simply carded yarn. But if v_u is less than 40 we have a combed yarn. The extent of the deviation of the combing value from the number 40 gives a measure of the combing.

As an example and limiting case the accompanying diagram of a staple length curve for 40's Mako carded (full line) and 120's Sakel combed (dotted line) will serve. If we compare the course of both curves we get only trifling differences. Also, any combing is hard to recognise with the eye. It is otherwise, however, with the combing values of both yarns. The combing value v_u amounts, with Mako yarn, to 43·16, with Sakel 36·69. Accordingly, the Sakel yarn, with its $v_u = 36{\cdot}69$, i.e., less than 40, was actually combed; the Mako, with its $v_u = 43{\cdot}16$, i.e., greater than 40, was only carded.

As limiting cases may be adduced:

It can happen naturally that a combed yarn shows a combing value v_u greater than 40 and will consequently be regarded as merely carded. In this case it may be that, in the combing process, none or only a small number of the short fibre portions were eliminated, or breakages of fibres may have occurred during the spinning process. In such a case, this type of yarn does not meet the requirements of a combed yarn. On the contrary, with yarn which has been simply carded, the combing value can lie under 40. That is the case if the material is already free from short fibres and impurities. Such a yarn compares in the matter of quality with a combed yarn.

A further similar case can arise with carded yarn of coarse count and quite small staple length, with a v_u less than 40. This circumstance leads to the conclusion that in spite of the small staple length we are dealing with a uniform material. This yarn will certainly be regarded as uncombed, for it would not be economical for a spinner to submit cotton with such a small staple length to a combing process.

The Behaviour of Cottons of Various Origins under Definite Swelling Processes.

By KARI KÜSEBAUCH

Communication of the Textilforschungsund Konditionieranstalt Reichenberg

AMONGST the most difficult of investigations is the task of determining the origin of a species of cotton in a scientific manner

Important in the question of quality are especially the staple the fineness of the fibre the colour the lustre the state of ripeness the cleanness and the foreign matter included The following method for raw cotton will serve as an additional criterion From various places in the raw cotton sample a large number of small samples are abstracted these being laid one over the other on the hand in the well known manner drawn apart from one another subsequently being divided in half according to the length and so on until a small sample remains for the actual testing This is cut in the middle by means of a sharp knife two of the cross sections which follow one another in sequence being embedded on object glasses the one in glycerine the other in a solution (Molisch soln) of two parts of caustic potash solution (30° Be) and one part of 25 per cent ammonia solution Both are now provided with cover glasses and the breadth of all fibres appearing in the preparation measured microscopically Micrometer values of 2–3 3 were used in our measurements First the sample in glycerine is measured and then that in the Molisch solution No attention is paid to the ripeness of the fibres

In this manner the following values are obtained —

1 —The arithmetic mean of the measurements of the fibre breadths in glycerine and in the Molisch solution

2 —The variations in fibre breadth their distribution the maxima and minima both in glycerine and in the Molisch solution

3 —The percentage increase in breadth of the fibres in the Molisch solution as against those in the glycerine

4 —A standard value i e the quotient of the geometric mean of the measurements in glycerine (a) and the Molisch solution (b), as well as their arithmetic mean thus

$$\frac{a \times b}{a + b}$$

In one table we note the values, as regards the sample taken by us, for the average fibre breadth, the minimum and maximum, the standard deviation and the variation coefficient, the glycerine and the Molisch solution values being shown separately. Further we show the increase in swelling and the so-called standard value. (This is a quantity denomination previously accepted by us.)

[This table can be exhibited in an oral report.]

The following table shows the variations with

(a) Egyptian cotton (Mako, Uppers, Sakel, Upper Egypt).

(b) Indian cotton (Oomra, Bengal).

(c) American (Carolina, Alabama, Texas).

	In Glycerine	In Molisch Solution	In Swelling	In Standard Value
	μ	μ	%	μ
(a)	12·9–19·1	17·1–25·6	23·3–42·5	7·46–10·92
(b)	16·7–24·1	23·3–30·9	13·7–46·4	9·91–13·33
(c)	17·3–21·0	23·2–28·2	25·3–39·4	9·84–11·95

or, in average values, where H is the main average, U the lower average and O the upper average,

	In Glycerine			In Molisch Solution			In Swelling	In Standard Value		
	H	U	O	H	U	O	%	H	U	O
		μ			μ				μ	
(a)	16·3	14·2	17·8	21·5	19·3	23·8	31·9	9·29	8·11	10·11
(b)	20·3	18·2	22·2	27·2	24·7	29·5	34·6	11·60	10·25	12·39
(c)	19·3	18·8	20·0	25·6	24·3	25·6	32·9	11·01	10·52	11·39

In this manner we arrive at an additional method of distinguishing between the individual types of cotton in question, since the Molisch solution has a mercerising effect. Bound up with this is also a method of determining the mercerising capacity. Types of cotton of equal staple and equal fineness may possess different swelling capacities and in such cases the behaviour of the various types, and/or various crops of the same origin, with regard to dye receptivity will be different.

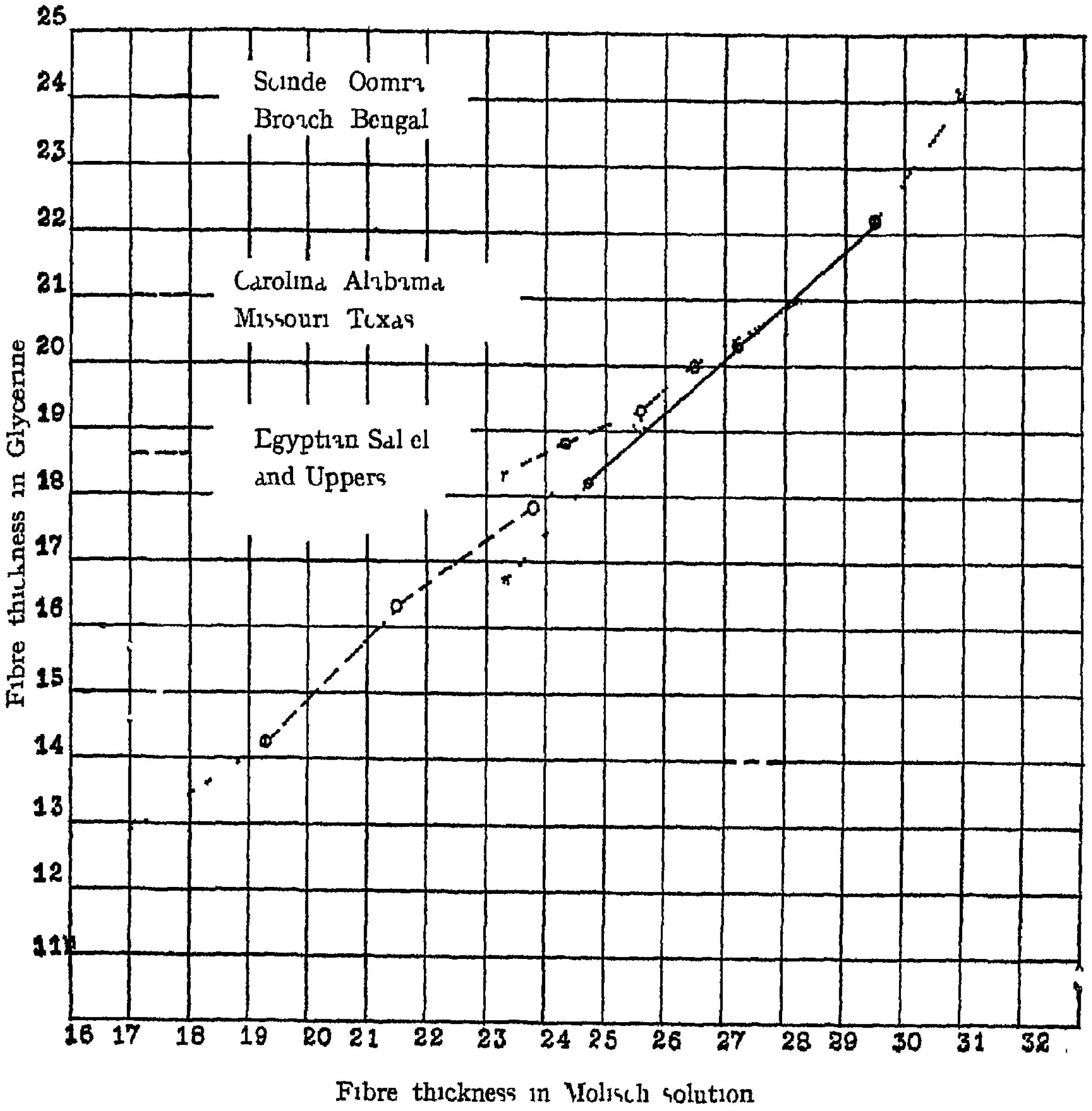
In the accompanying diagram are shown the results of the principal, upper and lower mean diameters, in glycerine and Molisch solution, for the three most important types of cotton, e.g., Egyptian (dot and dash), American (dashes), and Indian (full line); the dotted line represents the minimum and maximum values.

According to the graphs, the fineness of fibre varies in its extent most with the Indian, somewhat less with the Egyptian and least with the American. The latter is therefore more uniform in its individual qualities than the Indian and Egyptian. The Egyptian cotton is the finest, as it lies nearest zero in its mean values, then follows the American and Indian, the American corresponding almost wholly to the mean values (lower), i.e., to the finer sorts of Indian.

From all three curves it appears that the finer fibres have on the average a smaller capacity for swelling than the coarse fibres. In consequence of its fineness the Egyptian lies nearer the diagonal of the diagram than the Indian of coarser fineness and consequently of greater swelling capacity The American is less capable of swelling than the Indian and is therefore nearer the diagonal of the diagram than the Indian

In its mean values the Egyptian cotton touches neither the American nor the Egyptian and is therefore (except at extreme values) easily distinguished from them

All values adduced here are only for raw yarn



Research on Mercerization and Steeping.

By Ing. Dr. KARL SCHWERTASSEK,

Communication from the Textilforschungsund Konditionieranstalt, Reichenberg.

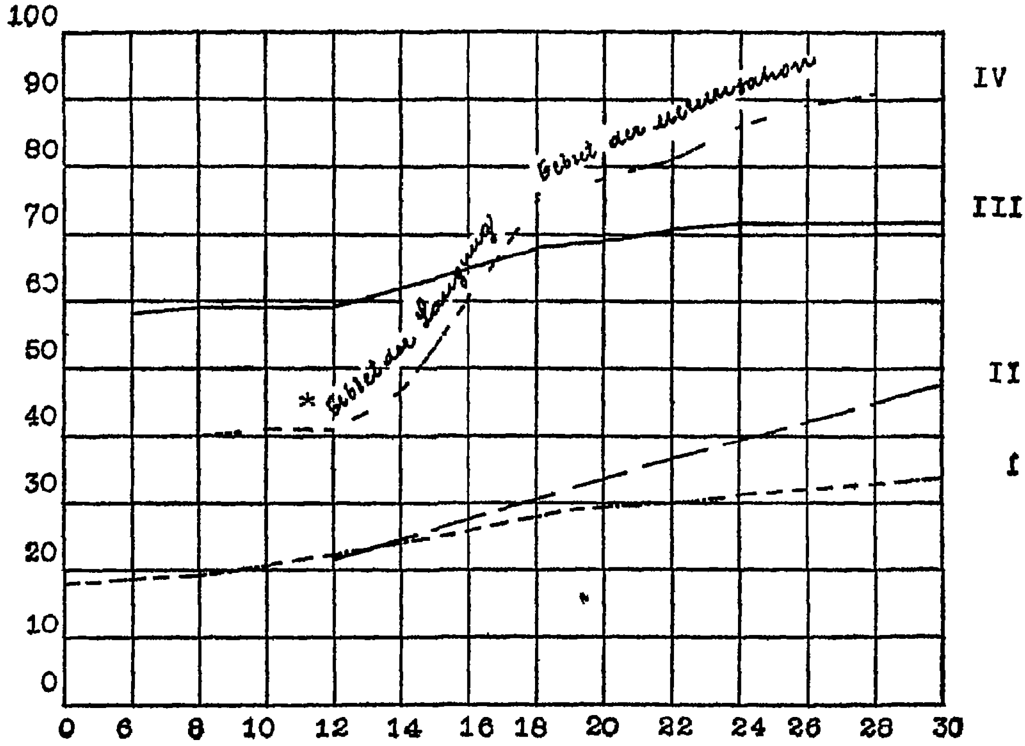
As is known, the treatment of cotton with strong caustic soda solution is one the most important of the cotton-finishing processes. If a soda solution, of more than 28·4–32·5° Tw. concentration is used, the cotton will be mercerized. If the concentration is from 21·6–32·5° Tw., only a so-called "steeping" takes place. It is known that mercerization imparts a special lustre and increases the receptivity of the cotton towards dyestuffs. As regards steeping, only increased receptivity results. In both cases there is a saving in dyestuff, and steeping is only resorted to on these grounds. With increasing concentration of the soda solution there is increased receptivity, which has its origin in the increased absorption capacity. It is thus of the utmost importance to be able to determine exactly the degree to which this capacity for absorption is possessed, in order to be able to decide on the concentration of the liquor to be used. It is known that, according to the concentration of the liquor with which a fabric has been treated, iodine tends to be retained by the fabric with varying intensity. This property of treated fabrics with regard to iodine has served for a long time to determine the degree of steeping. But the methods which depend on the observation of the intensity of a blue colouration are subjectively influenced, and on these grounds, as well as on others, are inexact and undependable; in many cases they are misleading. In the Reichengerger Research and Conditioning Institute a method has been worked out based on the quantitative analysis of the iodine held back by absorption; this method gives a *numerical* determination of the capacity for absorption. The method gives absolute values and allows of generally valid comparisons. On the grounds of its extraordinarily high sensitivity it also surpasses all other methods.

In Fig. 1 a comparison is made between all the most important methods. Because of the high sensitivity of the method it was possible to observe phenomena which hitherto were unknown and to perform research in a territory which has as yet been unworked. We refer to the explanation of those processes which are the *reverse* of the swelling processes (*Ent*quellungserscheinüngen), which are of paramount importance as regards the receptivity towards dyestuffs, of fabrics treated with concentrated liquor. These phenomena were, with few exceptions, merely perceived by practical workers, and a scientifically exact interpretation of them was lacking, the opinions of those with practical experience often being divergent The methods for the exact measurement of absorption proved very suitable for the study of the swelling (and the reverse) process which went on during the technical operations of mercerization and steeping Whilst the treatment with liquor has a swelling effect the reverse is the case

DIAGRAM I

Comparison of the sensitivities of various methods

I Dye absorptivity (Knecht)
III Black content number (Haller)
II Hydrolysis number (Schwalbe)
IV Iodine absorption



Abscissa Liquor concentration in Be

* Dotted Steeping process
Other Mercerizing process

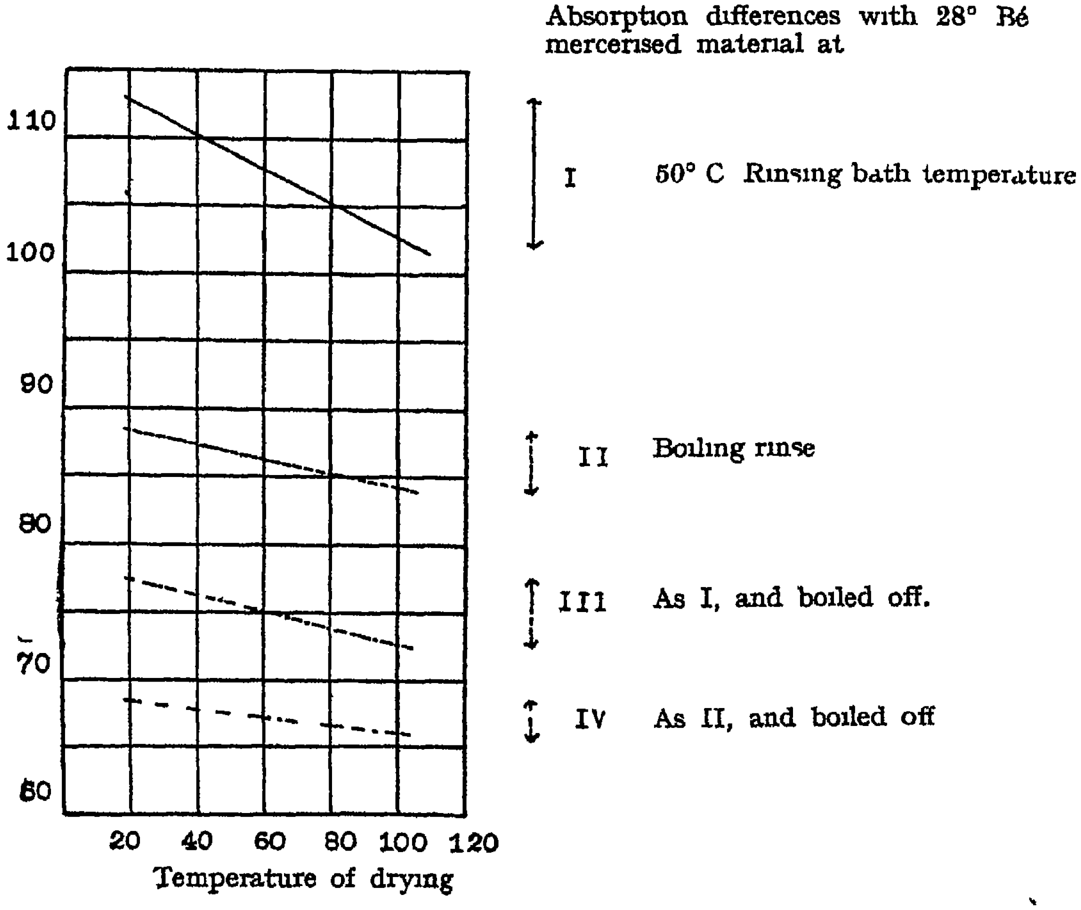
during the subsequent operations of rinsing souring bleaching drying and dyeing etc the intensity of this reverse process being influenced in various ways These subsequent processes on account of their effect on the shrinking (Entquellungs) process could be followed numerically and plotted in diagram form This work forms an important basis for the practical worker in his attempt to obtain a perfect and rational treatment of fabrics with soda liquor From the mass of diagrams obtained during our research work on absorption one example is given in Fig 2 which shows the reduction of drying errors in mercerized cotton by proper choice of rinsing temperature as well as a boiling of the dried goods before dyeing

Further exact knowledge of the shrinking (Entquellungs) process during technical mercerization and steeping is of importance for methods of chemical investigation With material which has been treated with liquor of a definite concentration quite varied absorption values are to be expected according as to whether the material has been bleached, dyed, dried, and dyed, washed, etc. As far as we can determine, the steeping question is productive of more stable results with regard to the "shrinking" process than is the mercerizing question.

Further, comparative investigations on yarn and fabric have been made with regard to the steeping and mercerizing processes, but the results have not yet been published.

DIAGRAM II

Absorption differences through drying in relation to temperature of rinsing bath after mercerization, and the influence of boiling on the dried, fully mercerized goods



As the valuable increased capacity for absorption obtained by treatment with soda liquor is often and powerfully affected by the drying process between mercerization and dyeing (such as takes place in the mercerization of yarns for stocking manufacture), means have been found by which this valuable property of the mercerized cotton can be retained wholly and lastingly. Besides the saving in dyestuff there is also a greater uniformity in dyeing.

Special mention should be made of the fact that the above method of measuring the absorptivity is valid for every stage of the finishing process. It is quite as good for washed as for bleached or dyed goods.

The exact data concerning the methods of investigation, as well as a great number of the results of our researches, were published in *Melliand Textilberichten*, as follows :—

Extracts from the above Publications:

1.—On a numerical determination of the degree of mercerization. Schwertassek, *Mell. Textilber.*, 1931, 457/8.

The method rests on the fact that a definite amount of fibre material (0·3 gr.) is soaked with a definite amount of iodine solution. This material is placed in a closed flask with exactly 100 ccs. of a saturated Glauber Salts solution at 22·5° C., and is well shaken until the equilibrium point is reached. This ought to be reached after a reaction period of one hour. Thereupon 75 ccs. of the Glauber Salts solution are drawn off through a pipette, care being taken to take up none of the fibre material, and its iodine content is determined. On a basis of numerical calculation we arrive indirectly at the iodine content of the fibre material. The figures obtained are designated *absorption figures* (A.Z.) and constitute a measure of the degree of swelling of the fibres.

2.—On absorption phenomena in mercerized cotton. Schwertassek, *Mell. Textilber.*, 1932, 536/9.

If cotton yarn is treated with lye of increasing concentration and if the values received are plotted in diagram form (Fig. 1) then three sections are easily perceived. Lye concentrations of 0–18° Tw.: the lye exerts no influence on the absorptive capacity of the fibres. Lye concentrations of 18–20° Tw.: within this range the absorption capacity increases most rapidly. This is called the "laugung," or "lyeing" stage. Lye concentrations of 28·5–52° Tw.: this is the mercerization stage and here the absorption curve flattens out considerably. These data hold for treatment under conditions of ice cooling At room temperature the absorption diagram moves upwards in the sense of a depression of the lye absorption. The form of the curve, however, always remains the same. Bleaching and boiling have a restrictive effect on absorption. The "lyeing" stage, in this respect, appears to be more stable than that of mercerization. The restrictive effects of bleaching and boiling on absorption are shown graphically A weak bleaching powder solution of 0·3° Be has no effect on "lyed" material, but has a restrictive capacity on the absorptive capacity of mercerized material, likewise, the difference between a strong bleach and a boiling operation is very clearly discernible. Through numerous alternative boiling and drying a far-reaching decrease of absorptive capacity is obtained. That loss of absorptive capacity received by boiling after mercerization is by far the largest, the subsequent losses being continuously smaller. The temperature of the rinsing process is of great importance for the intensity of the increase in absorptivity. Low temperatures do give a higher, but an instable absorptive capacity. There follows a description of the differences in absorptivity caused by irregularities in drying, which have a deleterious effect in dyeing. Hot rinsing after mercerization is completed and boiling before dyeing have a compensatory effect.

3.—On the determination of the degree of mercerization by means of the iodine absorption method. Schwertassek, *Mell. Textilber.*, 1933, 73/5.

This article deals with the practical use of the method. It is demonstrated that is it not influenced by the count or the twist of the yarn, as is the case with all other methods which depend on the observation of the blue coloration and depend on the principle of iodine absorption. Further, small influences of the origin of the cotton and its degree of ripeness have been shown to have an effect on the increase of absorptivity following the mercerization process. In the application of the method for the testing of dyed material, all dyeings possible for mercerized cotton were tested for their probable influence on the iodine absorption method. As regards the temperature maintained whilst dyeing, the method proved generally useful for all dyed cotton materials; dyeings with basic dyes as well as those with aniline black were dyed by methods given in the article, so that both raw, bleached and dyed mercerized cotton could be dyed without exception.

Other work, hitherto unpublished, was also carried out:—

The influence of souring on the loss of swelling (Entquellung) after completed mercerization.

Course of the loss of swelling at the various drying temperatures (Diagram).

Comparative investigations as to mercerization of yarn and thread.

Studies on the Dyeing of Cotton Fibre.

By WILHELM SIEBER and KARL KÜSEBAUCH
(Report from the Textilforschungs und Konditionieranstalt, Reichenberg.)

IN 1928 one of the writers published in the *Melliand Textilberichte* (page 404) a method of distinguishing between raw and bleached cotton in yarn containing raw and bleached fibres. The differentiation rested on the different behaviour of these fibres when treated with Victoria Blue B. Raw cotton dyes dark, but bleached dyes light.

Only the following explanation could be given at that time: "Whether the deep dyeing of the raw fibre is caused by protoplasmic substances, the oils of the fibre, or the cotton wax, or by all three, has not been decided up to date. In any case we are entitled to believe that the dyeing method described is suitable for giving valuable results concerning the degree of bleach and the chemical structure of raw and bleached plant fibres."

In the course of further investigations concerning the behaviour of cotton under the Victoria Blue reaction it has been shown that the cuticle of the cotton fibre, as well as the material making up the internal tube of the fibre, is dyed when treated with an aqueous solution of Victoria Blue B, whilst the cellulose component of the fibre remains undyed. According then to the amount of cuticle and interior material contained in the interior tube of the fibre, different depths of dyeing are obtained. We have thereby a means of recognising the various degrees of bleaching of cottons.

The different types of cotton have also different behaviour under the reaction.

We have further discovered that the interior material of the fibre is dyed differently from the cuticle by an additional dyeing reaction. This is shown by means of Benzopurpurin 10B.

The first dyeing is carried out by a few minutes' boiling of the cotton with a 0.15 per cent aqueous solution of Victoria Blue B; the cotton so treated is then boiled with water until the water itself becomes coloured. The sample is then boiled with a 0.1 per cent aqueous solution of Benzopurpurin 10B, and subsequently boiled with water until the latter remains completely uncoloured. Only pure distilled water must be used in these tests.

The dyeing with Victoria Blue alone is not sufficient when investigating the material of the interior of the fibre tube, but is sufficient when simply dealing with the differentiation of types of cotton or determining the degree of processing it has undergone.

In the Victoria Blue test, comparison by the naked eye alone is sufficient Microscopic examination is resorted to, especially when investigating for the presence of the cuticle, when assistance is gained from the swelling induced by the application of Schweizer's reagent The samples dyed with Victoria Blue and, subsequently, with Benzopurpurin, when examined under the microscope in the swollen state, show the cuticle blue, the internal material red to brown With the Victoria Blue dyeing process both the cuticle and the internal material are dyed blue

It has been shown that, with different types of raw cotton which we have tested, different dyeings are obtained with Victoria Blue

The different dyeings obtained with cotton in different stages of bleaching are even more striking

In order to discover whether it was not the fatty substances in cotton alone which controlled the dyeing, samples were extracted with carbon tetrachloride

We have collected a series of samples of cotton in the raw state and in different stages of bleaching after extraction, which clearly show differences Further, microphotographs were taken of preparations of these cottons All show clearly pertinent details

Such preparations dyed with Victoria Blue and with Benzopurpurin are especially interesting

(We shall report orally, showing samples of the material tested)

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Fatigue or Hysteresis Phenomena in the Case of Tensile Stress on Cotton Yarns.

By KARL KÜSEBAUCH.

(Communication from the Textilforschungs- und Konditionieranstalt, Reichenberg.)

WITHOUT going more closely into the methods at present employed to determine the elasticity of yarns, a brief description will be given of a combined method consisting partly of tests hitherto customary and new tests. For carrying out the determinations, use was made of hydraulically operated Schopper tensile strength-testing apparatus with a curve recorder, a scale from 0-200 g. or 0-1,000 g., and for a clamped length of 500 mm. The relative atmospheric humidity of the test rooms was 64-66 per cent., and the temperature was 18-20° C. Three different tests, each of five individual determinations, were made for each yarn, and an average arrived at. The tests in question were: —

1. The normal force-elongation curve.
2. An elasticity test with one tensile stress in each case, in stages of 1 per cent.
3. An elasticity test with ten tensile stresses in each case in stages of 2 per cent.

A weight corresponding to 100 m. of the particular yarn was taken as preliminary weight. When unloaded the breaking speed of the yarn was 10 cm. per minute.

1. The load stages in g. and, according to the method of calculating the breaking length, the load kilometres were determined from the normal force-elongation curves for the individual changes in length of the yarns in stages of 1 per cent., that is for each change in length of 1 per cent. the load stages in km. (metric count × kg.) were ascertained. Load kilometres were chosen in place of weights in g. in order to enable better comparison of yarns of different counts. From the load stages in km. and the particular changes in length in percentage, a new work diagram was traced, the fullness value η (relation between elongation in percentage and load in km.) from the relation between the working surface and the surface of the rectangle described by the latter, the mean pressure P*m* (the mean load) equal to the fullness value η times the breaking load P max. in km., that is, $Pm = \eta$ times P max., and from these values was calculated the specific work of tension or the work modulus A_0 (force × time).

The specific work of tension A_0 is equal to the product of the fullness value η, the breaking load P max. in km. and the hundredth part of the breaking tension as a percentage.

2. Determination of the elasticity with one tensile stress in each case in stages of 1 per cent. was ascertained as follows, due observance being paid to the breaking conditions. The curve recorder was brought into operation and the yarn loaded, and elongated up to 1 per cent., the movement of the piston stopped, and the curve recorder placed out of operation, and the yarn released to its original length by moving back the piston; following this the curve recorder was again brought into play, the piston moved in a forward direction, the yarn thereby being loaded and extended to 2 per cent., the piston stopped, the curve recorder placed out of operation, the yarn released, the curve recorder brought into operation once more, the yarn loaded up to 3 per cent. and so on up to the point of break. From the resulting diagram the individual total elongations (in stages of 1 per cent.), the elastic and permanent elongations appertaining thereto were ascertained as a percentage, in addition to other properties. As is known, total elongation is permanent elongation plus elastic elongation. The degree of elasticity for the individual stages of total elongation is equal to the quotient from the elastic elongation and the particular total elongation. The degree of total elasticity was determined as follows:—

In a system of co-ordinates the elastic elongations as abscissæ are plotted over the relevant total elongations as ordinates, and the elasticity curve ascertained by combining the various points found. With complete elasticity the total elongations in all elongation stages are equal to the elastic elongation, and a straight line at an angle of 45° is then obtained as elasticity curve. The relation between the elastic surface of elongation found and the complete elastic surface of elongation gives the degree of total elasticity. The degree of total elasticity is equal to 1, when complete elasticity predominates. If the degree of elasticity found varies more and more from 1 in a downward direction, then the lower is the elasticity of the yarn.

3. Determination of the elasticity with ten tensile stresses in each case in stages of 2 per cent. was carried out in similar manner to the tests referred to under (2), but with the difference that the elongation stages were 2 per cent. instead of 1 per cent., and that at each elongation stage the yarn was extended or stressed not once only, but ten times. The elastic elongations and degrees of elasticity were ascertained after each tenth stress, the degree of total elasticity being determined therefrom on the basis of the fatigue. The relation between the degree of total elasticity on the basis of the fatigue on the one hand, and the degree of total elasticity without fatigue on the other, gives a value for the degree of fatigue.

A large number of yarns and twists in an untreated and treated (finished) state were tested in the manner described, and surprising results were obtained. The tables and the opinions thereon would take up too much space, and cannot naturally be given in the scope of this paper. The following example, arbitrarily extracted from the vast amount of investigated data, can, however, be taken as a guide.

A 20's cotton yarn, designated as XV-52-bordeaux is stressed and tested in the manner described in the foregoing. We obtain, (according to the following Table I) the normal force-elongation curve "a," (2) the elasticity determination diagram with one tensile stress in each case in stages of 1 per cent "b," and (3) the elasticity determination diagram with ten tensile stresses in each case in stages of 2 per cent "c". The diagrams "a," "b" and "c" are evaluated according to a scale "d".

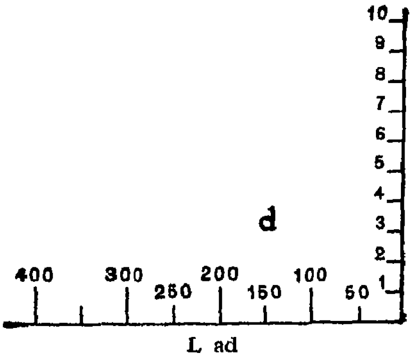
Total elongation stages in %	1	2	3	4	5	6	7	8	Breaking strength in g	Breaking tension in %
(a) Corresponding load in g	30	63	96	140	185	240	293	—	327	7.7
(b) Corresponding load in g	28	55	87	122	170	220	275	325	340	8.5
Permanent elongation	0	0.6	1.2	1.8	2.4	3.2	4	4.9	—	—
Elastic elongation in %	1	1.4	1.8	2.2	2.6	2.8	3	3.1	—	—
(c) Corresponding load reduction in g from	—	90	—	180	—	208	—	—	340	7.6
to	—	70	—	145	—	190	—	—	—	—
Permanent change in elongation in % from		0	—	0.8	—	2.3	—		—	—
to	—	0.8	—	2.3	—	4.1	—	—	—	—
Elastic change in elongation in % from	—	2	—	3.2	—	3.7	—	—		—
to	—	1.2	—	1.7	—	1.9	—	—		—

The load weights obtained in g are converted into load kilometres similar to R km = metric count × kg and the other elastic elongations and degrees of elasticity calculated for the individual elongation stages.

Total elongation stages in %	1	2	3	4	5	6	7	8	Breaking length in km	Breaking tension in %
(a) Loads in km	1.02	2.14	3.25	4.75	6.27	8.14	9.93	—	11.09	7.7
(b) Elastic elongation in %	1.0	1.4	1.8	2.2	2.6	2.8	3.0	3.1	—	—
(b) Degrees of elasticity	1.0	0.7	0.6	0.55	0.52	0.47	0.43	0.39	—	—
(c) Elastic elongations in %	—	1.2	—	1.7	—	1.9	—	—		—
(c) Degrees of elasticity	—	0.6	—	0.43	—	0.32	—	—	—	—

From the total elongation stages in percentage and the appertaining loads in km the work diagram "a1" is traced. In this case the working surface is $\overline{ABC}$, and the total surface $\overline{ABCD}$. The relation of these two surfaces to one another $\frac{ABC}{ABCD}$ gives the fullness value η. In our example the value $\eta = 0.553$ is obtained by planimetering. The mean load $Pm = \eta$, $P\max = 0.553 \times 11.09 =$ 6.133 km. The specific work of tension A_0 is equal to the product from the mean load in km and the hundredth of the breaking tension in percentage, that is $A = 6.133 \frac{7.7}{100} = 0.472$ mkg/g.

The elasticity diagram "b1" without fatigue and "c1" on the basis of fatigue are established from the elastic elongation values and the appertaining stages of total elongation. By planimetering the surfaces $\overline{ABC}$ and $\overline{ABD}$ (latter complete elasticity) we obtain for "b" and "c" the degree of total elasticity. This is equal to $\frac{ABC}{ABD}$, therefore for "b" = 0.509 and "c" = 0.421, that is, in our example the degree of total elasticity without fatigue is 0.509 and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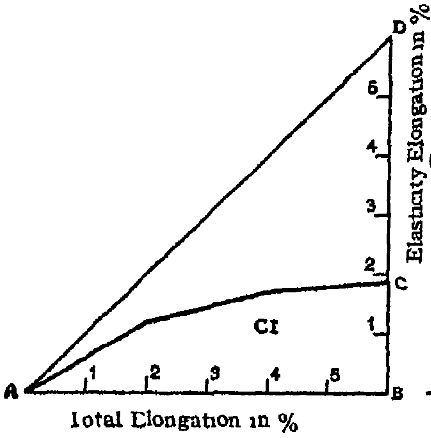
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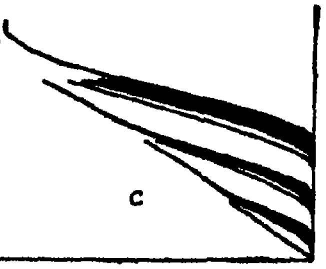
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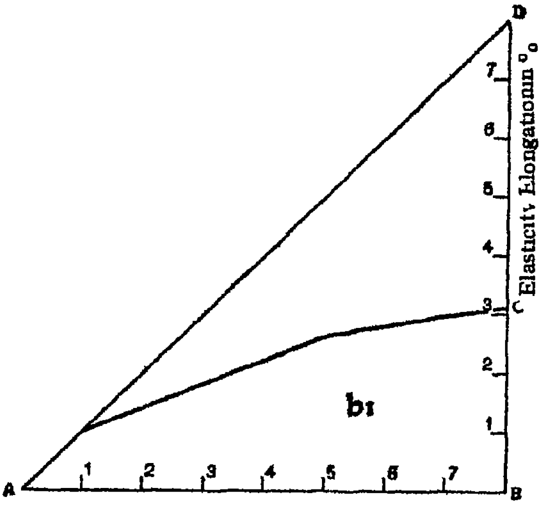
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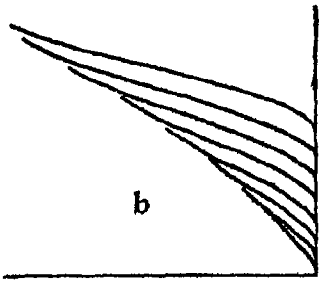
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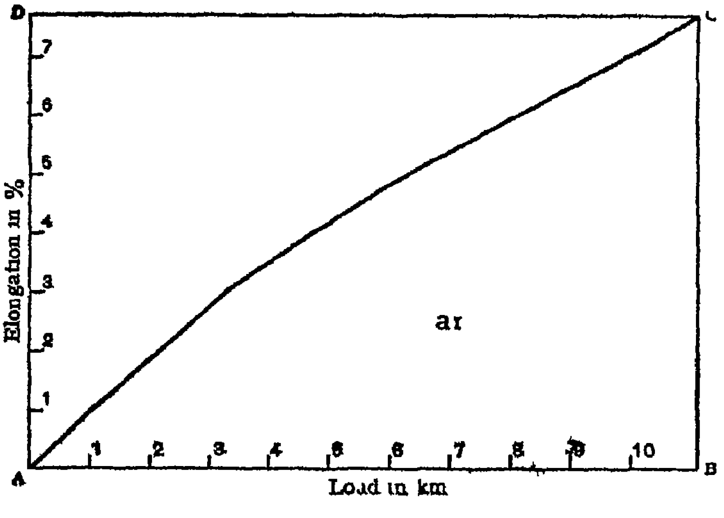
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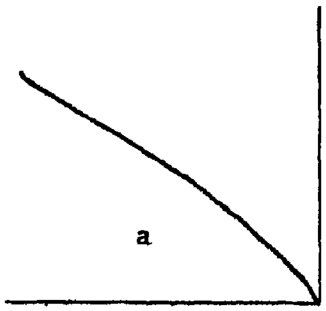
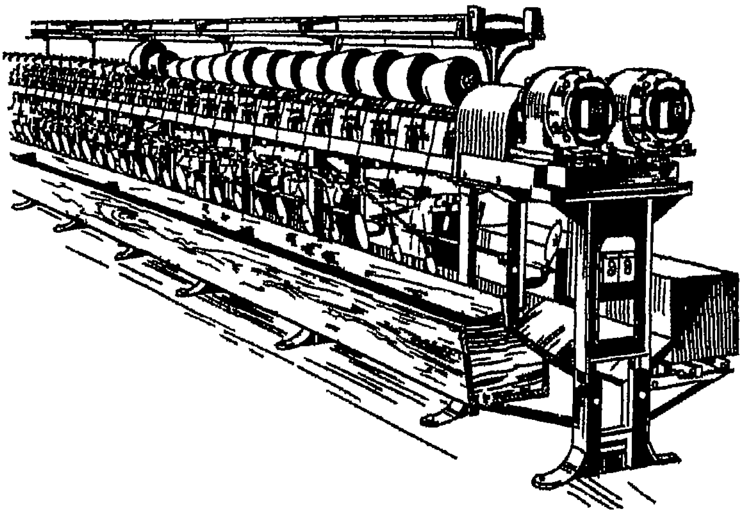
Load in km

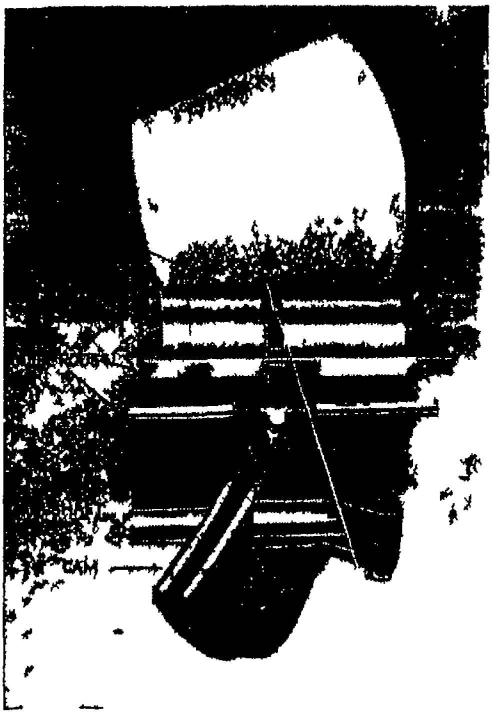

a

with fatigue 0 421 With complete elasticity the degree of elasticity is equal to 1 0 The relation between these two degrees of elasticity with and without fatigue $\frac{0\ 421}{0\ 509}$ gives a degree of fatigue which in this case is 0 827

If the degree of fatigue is equal to 1, then no fatigue has taken place during the tests carried out as described , the further the value recedes from one in a downward direction, that is the smaller it becomes, then the more capable of fatigue is the yarn The value for fatigue phenomena is very important for the working up of yarns more particularly in the weaving and knitting branches in their various stages In addition to cotton all kinds of yarns in a great variety of fibres such as wool, silk, etc , were tested in a very comprehensive investigation of which the foregoing case represents only a small abstract



ONLY THE YARN RECIPROCATES!



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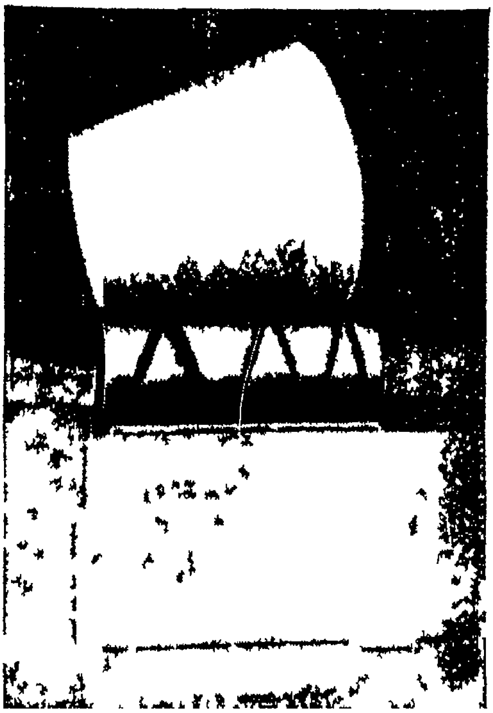

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Recent Improvements in Textile Machinery.

Paper prepared by FRANK NASMITH, F T I, and WALTER ENGLISH, M Sc Tech, F T I, for the International Cotton Congress, Prague and Carlsbad, June, 1933, on behalf of the Textile Machinery and Accessory Exhibitors' Federation

A NUMBER of interesting developments have to be recorded in relation to textile machinery and processes during the past two or three years Although these cannot be considered extremely revolutionary, as they do not embody any drastic change in principle or standard, they represent definite progress Increase in production, improvement in quality and better economic returns are ensured by the adoption of many of the improvements detailed in the following paper

Undoubtedly the greatest activity has been expressed in the blowing room, and practically every textile machinist in Great Britain has been responsible for one or more improved machines or systems The general adoption of the single process system in this connection is most marked In the spinning section there is to be noted the various attempts at the improvement of the ring frame, the development of large package spinning and the introduction of new methods and machinery in relation to doubling It has been appreciated that the provision of a large supply of yarn, either from the spinning machine or from a subsequent winding frame, will ensure economic results that are worthy of consideration In the doubling section cone supplies have been advocated and methods of magazining such supplies, providing thereby a practically inexhaustible supply of material, secure an economic production of high value A new type of twisting frame for tyre yarns has been proved a definitely practical proposition, the ultimate costs of the finished cord yarn being very much below that secured by any other system A new winding machine void of all reciprocating parts has been introduced to secure the higher speeds which are demanded to-day, and in the warping section by the employment of cone supplies the same object—namely high speed and high production—is achieved

There is comparatively little development to be recorded in the weaving section Shuttleless looms and a new loom, the shuttle of which carries a very considerable amount of weft, being the most important A let-off motion evolved by the Shirley Institute and mechanically perfected by a firm of loom makers is worthy of notice

BALE OPENING AND MIXING

Experience has shown that the action of the hopper bale opener is exceedingly effective in the early treatment of cotton, and as a consequence textile machinists are paying special attention to this method of opening cotton Dobson & Barlow, of Bolton have introduced a "high draft" hopper bale opener in which a subsidiary spiked lattice is introduced in addition to a dust cage and exhaust fan, in order to open and clean the cotton more thoroughly than is possible in the ordinary hopper bale opener Following the stripping of the cotton from the main spiked lattice by the stripping roller, instead of passing forward to the delivery trunk or lattice, as in the usual type of bale opener, the cotton is directed to a spiked roller operating at the lower end of the secondary spiked lattice, where further combing of the cotton takes place An adjustable plate is mounted in position above this spiked roller in such a manner that if the intensified opening action at this point is not required, the cotton may be taken direct to the secondary spiked lattice without receiving any combing action at the spiked roller Leaving the lattice the cotton is drawn by suction to the rotary cage which extracts dust and the finer impurities from the cotton

A combination of two bale openers is sometimes used where the cotton requires to be exceptionally well opened the construction of the spiked lattices and evener rollers being graded to suit the different conditions of the cotton

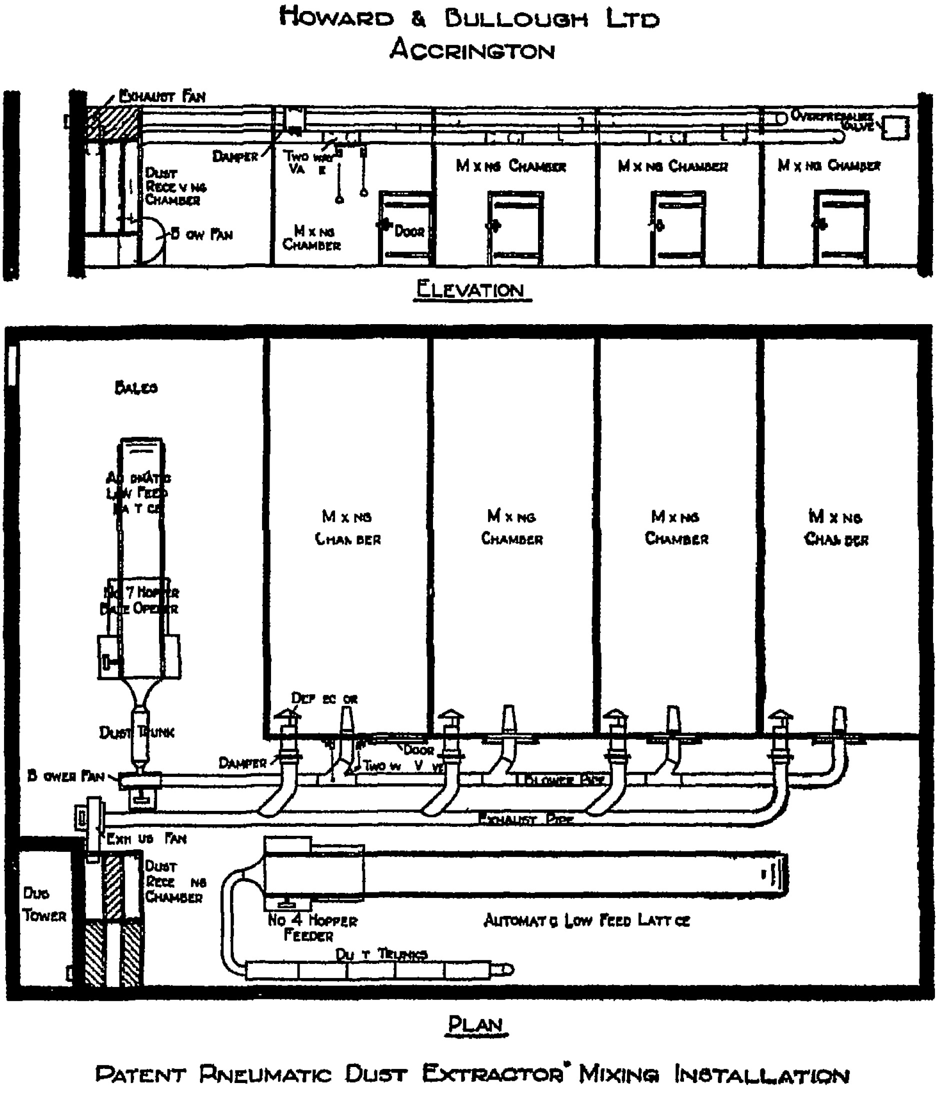
The increasing importance paid to dust extraction and cleanliness of the atmosphere, particularly in cardrooms, is leading to the more extensive use of pneumatic systems of mixing and conveying the cotton

Dobson & Barlow have for many years specialized in pneumatic mixing installations, their method of conveying and mixing the cotton being by means of pneumatic delivery boxes which draw the cotton by suction to a position above the mixing, where it is collected on a cage and allowed to fall by gravity into the stack This firm also make a rivet trap in the pipe leading from the bale opener to the mixings for preventing solid objects, such as bale rivets and fasteners, etc from going forward into the mixings

Howard & Bullough, of Accrington, utilize a blower fan in their system This blower is situated between the bale opener and the mixings, and its function is to beat and then blow the cotton forward into the mixing bin, which is enclosed and practically air tight An exhaust fan removes the released dust and finer impurities floating in the air, from the bin

Reverting to the open type of mixing bin where the cotton falls from the delivery box by gravity, Brooks & Doxey, of Manchester, have devised an improved rotary distributor, which automatically distributes the cotton over an even area of the bin Without a distributor the cotton falls more or less in one position, constant attention by hand labour being required to distribute it over the area required Some types of distributors throw fibre and dust into the air, causing an unhealthy atmosphere The distributor under consideration is free from this defect, since it is so designed that an even distribution of the cotton is obtained at a relatively low speed

The apparatus consists of a revolving tin-dish mouthpiece mounted on ball bearings and driven from the mixing box The arrangement is also effective in assisting in the thorough blending of the cottons



Pneumatic Dust Extractor Mixing Installation —Howard & Bullough Ltd

SINGLE PROCESS OPENING AND SCUTCHING

Modern cotton opening machinery consists of a combination of opening and cleaning elements which are so connected that the cotton passes automatically from the first to the last machine in the series, being delivered as an opener lap ready for placing on the feed lattice of the scutcher Until within recent years it was not considered advisable to link up the scutcher in this series owing to the fact that the " doubling " or putting up of four laps on the feed lattice of this machine was considered to provide a lap of greater regularity than it was possible to obtain in any combination of machines where this "doubling" could not be carried out. Very considerable improvements in the feed control systems of opening machinery have, however, effectively overcome this objection, and numerous tests have shown that finished laps from the latest type of single process combinations of openers and scutchers are at least as regular as, and in some cases more regular than, laps produced from separate finisher scutchers, whether tested lap by lap or yard by yard.

For fine counts, stack mixings are retained, and the single process combination begins with the hopper feeder. For medium and coarse counts the combination begins at the bale opener, there being no further handling of the cotton until it emerges as a measured lap ready for the carding machine. Pneumatic conveying of the cotton, the application of extremely sensitive devices for regulating the supply of cotton at various stages of its passages through the machine, and the adoption of electrical starting and stopping motions have all contributed to the success of the system.

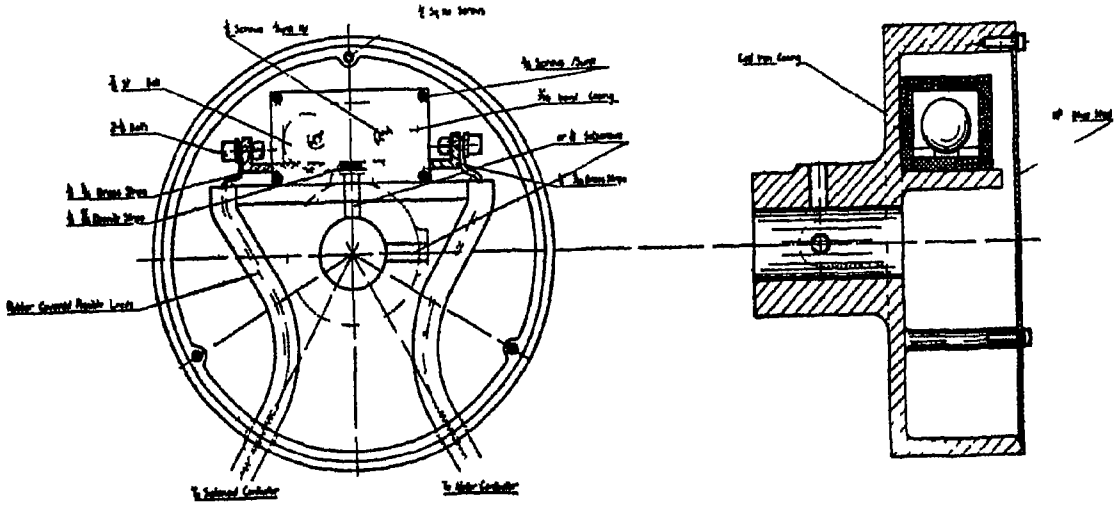
Pneumatic conveying, in conjunction with cages, assists in spreading the cotton evenly across the width of the machines, as well as lengthwise, thus ensuring uniformity of opening and cleaning throughout the combination. The extended use of dust trunks provides further cleaning facilities. Regulating devices are applied at the bale opener and at the various hopper feeders so as to maintain a constant height in the hoppers and thus assist the evener rollers in providing a uniform delivery. This regulation is of special importance in the last hopper feeder in the series, the one which feeds the scutcher and lap machine. The cotton at this stage is in a well-opened condition, being light and fluffy, and so demands a particularly sensitive regulating arrangement. Several firms apply a reserve bin to this hopper feeder, arranged behind the main hopper bin. A slightly inclined lattice working along the base of this reserve bin, in conjunction with a geared roller, feeds the main bin, and is controlled by the amount of cotton in the main bin, the lattice stopping and starting through a sensitive swinging door regulator, and so maintaining a constant weight of cotton against the spiked lattice. In some cases a tandem hopper feeder is used, having two spiked lattices and strippers, the second hopper controlling the movement of the first lattice.

ELECTRICAL CONTROL SYSTEMS.

The application of electric remote control systems to the single process combination has assisted in increasing the sensitivity of feed regulation, and at the same time has eliminated the rods and levers previously used. With electrical control there is much greater flexibility possible in the arrangement and disposition of the machines. Another feature is that the lifting of the drop lever at the lap machine to restart after removing a full lap becomes an easy operation where formerly it required considerable effort on openers owing to the weight of rods and levers involved.

John Hetherington & Sons have recently introduced a new type of switch for their electrical control system, which they term a "gravity switch." The contacts are made by the rolling of a steel sphere along a specially prepared track, and as the switch is mounted on the pivot of the balanced door in the hopper, it will be understood that relatively slight movements of this door will be sufficient to send the sphere in one or other direction The switch is practically fool proof, operating without either counter balancing weights or springs The balanced door movement is limited to about 5°, and the weight of cotton in the hopper does not vary by more than 1 lb

The arrangement can also be applied to the two way dividing arrangement where the cotton, after being collected by the cage condenser from the preceding opening machinery, is distributed to two hopper feeders forming part of the scutcher and lap forming units In this case the switch is made with contacts at both ends of the track One pair of contacts operates to stop the lattice which fills the hopper whilst the other pair energizes the solenoid controlling the main supply machine The arrangement ensures that both hoppers are supplied with absolute precision The system of feeding the hoppers by lattice differs from that of most Lancashire machinists, who utilize pneumatic means The application of a reserve cotton box to their hopper feeder, arranged above the scutcher lattice, the cotton being always maintained at a constant height in the box, enables this firm to limit the operation of the pedal feed regulation to the scutcher feed lattice—that is, no additional strain is imposed on the cone drum belt because it is not required to drive the spiked lattice of the hopper



Gravity Switch for Electrical Control of Opening Machines —
John Hetherington & Sons Ltd

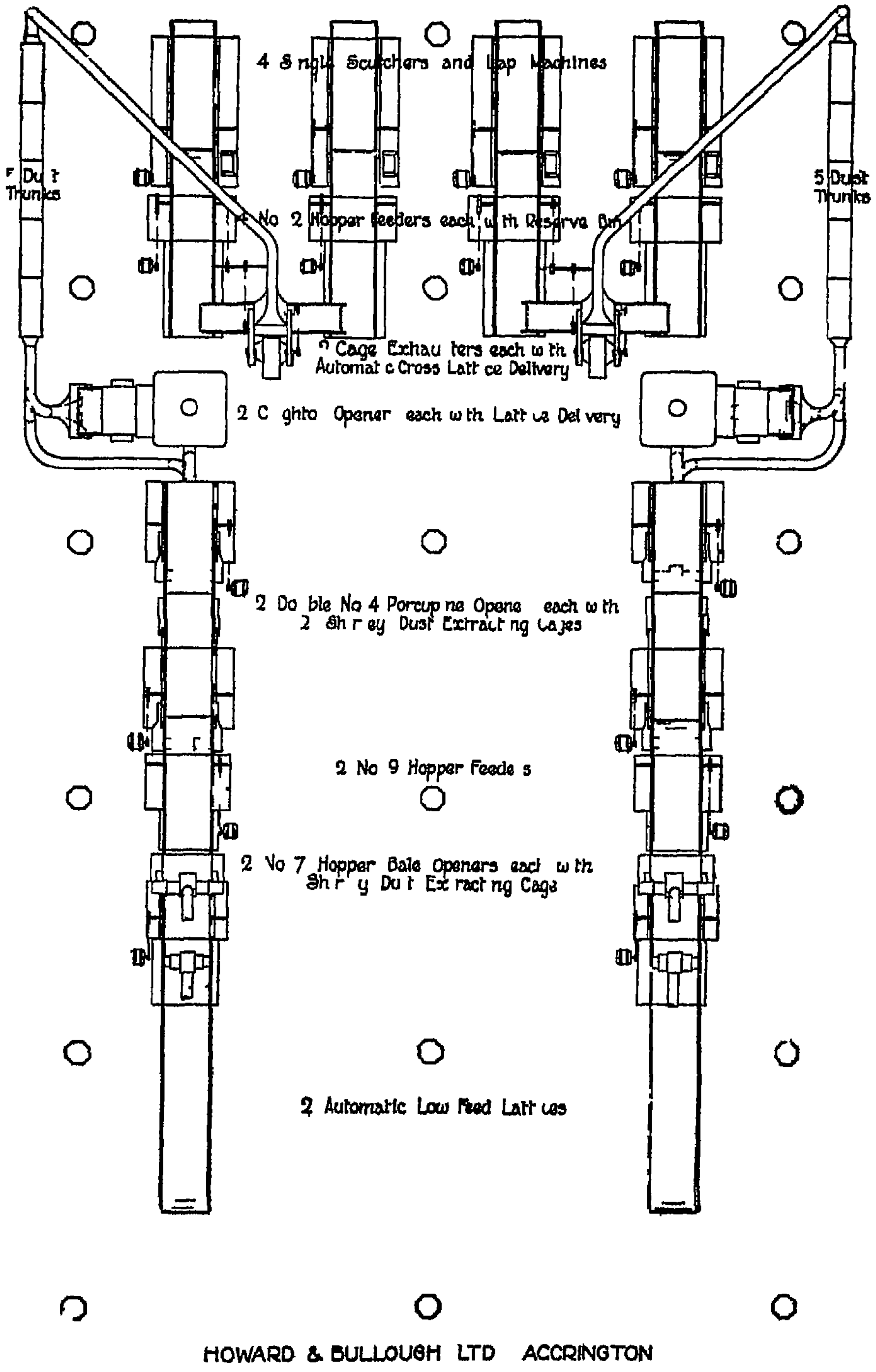
SOME TYPICAL SINGLE PROCESS COMBINATIONS

The following are typical installations of single process opening and scutching —

Dobson & Barlow's system with pneumatic mixings and embodying the exhaust opener is intended for cottons to be spun to counts from 40's to 60's The hopper bale opener is coupled to a vertical opener, with by-pass, so that if necessary the vertical opener process may be omitted The cotton then passes through gridded dust trunks to the mixing stacks Where stack mixing is not employed, the sequence is hopper bale breaker, hopper feeder, porcupine opener, vertical opener with by pass, dust trunks, and exhaust opener From this opener the process is the same in either system The cotton passes through a trunk to the pneumatic delivery box, and to the automatic double feed and control trunk, which feeds the hoppers of two finisher scutchers This control trunk automatically maintains a constant level of cotton in each hopper It is so devised that it can supply both hoppers simultaneously, or each one separately, or stop both supplies, according to the quantity of cotton in the hoppers

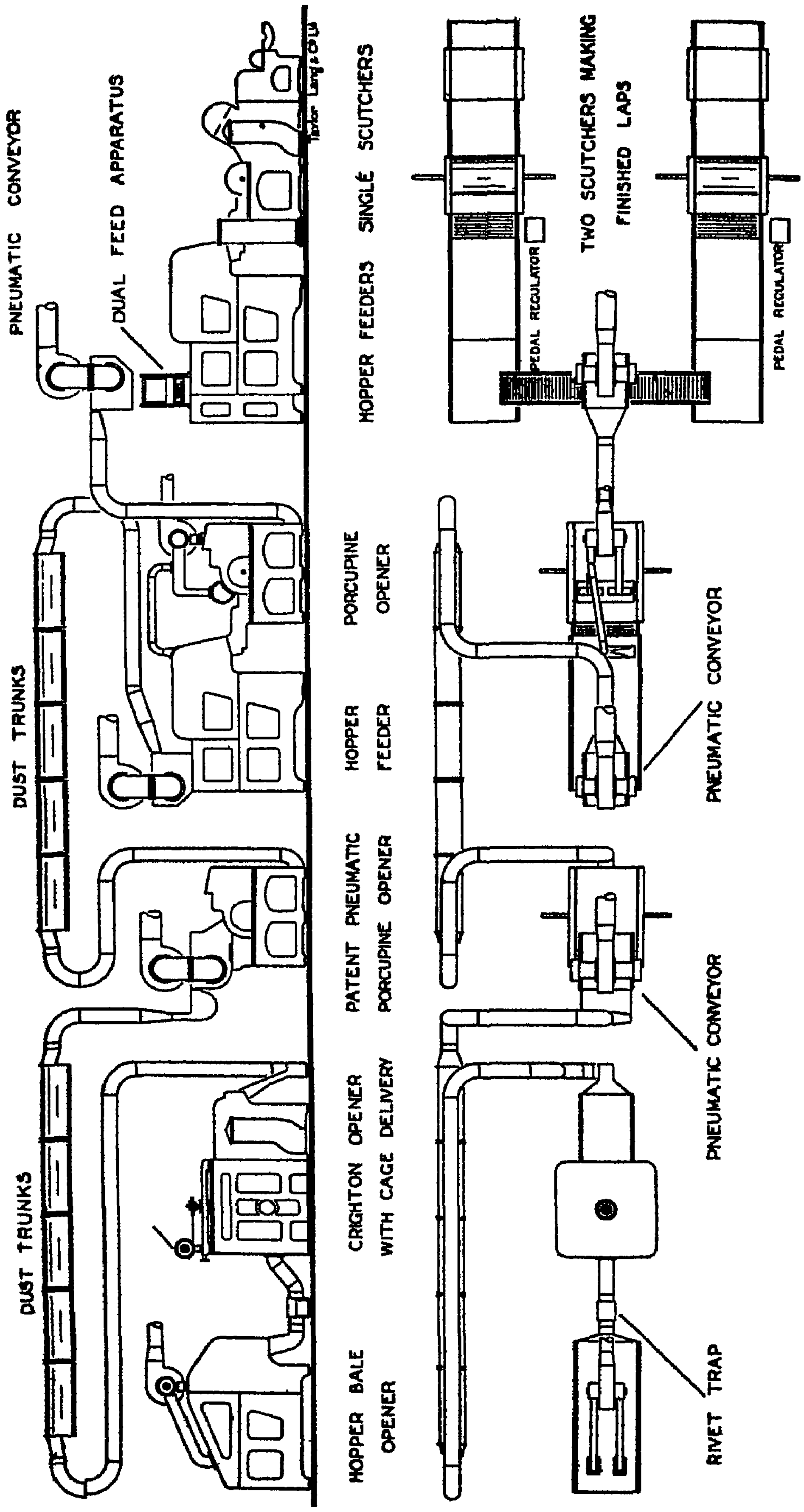
Automat c Double Feed and Control Trunk —Dobson & Barlow Ltd

Platt Bros ' single process combination for Indian cottons comprises two hopper bale openers, delivery to one hopper opener through the medium of a condenser, Crighton opener with by-pass, another condenser, delivery to a hopper feeder, lattice feeder with Shirley dust cage, Crighton opener with by-pass, gridded dust trunks, condenser, delivery to two hopper feeders by means of an automatic distributor, each hopper feeder delivering the cotton in carefully regulated quantities to a cylinder, followed by cages, beater, cages again, and finally the lap forming mechanism This combination has an effective grid area of 17,950 sq ins A special feature is the automatic distributor, which by means of electrical control distributes the cotton in the requisite quantities to the two hopper feeders of the lap machines or precision lappers,


4 Single Scutchers and Lap Machines
5 Dust Trunks
5 Dust Trunks
4 No 2 Hopper Feeders each with Reserve Bin
2 Cage Exhausters each with Automatic Cross Lattice Delivery
2 Crighton Openers each with Lattice Delivery
2 Double No 4 Porcupine Openers each with 2 Shirley Dust Extracting Cages
2 No 9 Hopper Feeders
2 No 7 Hopper Bale Openers each with Shirley Dust Extracting Cage
2 Automatic Low Feed Lattices
HOWARD & BULLOUGH LTD ACCRINGTON

Plan of Single Process Opening Installation—Howard & Bullough Ltd

ensuring uniform laps These precision lappers are equipped with an automatic timing motion, providing completely automatic control throughout the whole combination The hopper feeders are constructed with a reserve bin or hopper immediately behind the main hopper to assist in maintaining a constant quantity of cotton in the latter



Plan and Elevation of Single Process Opening Installation — Taylor, Lang & Co Ltd

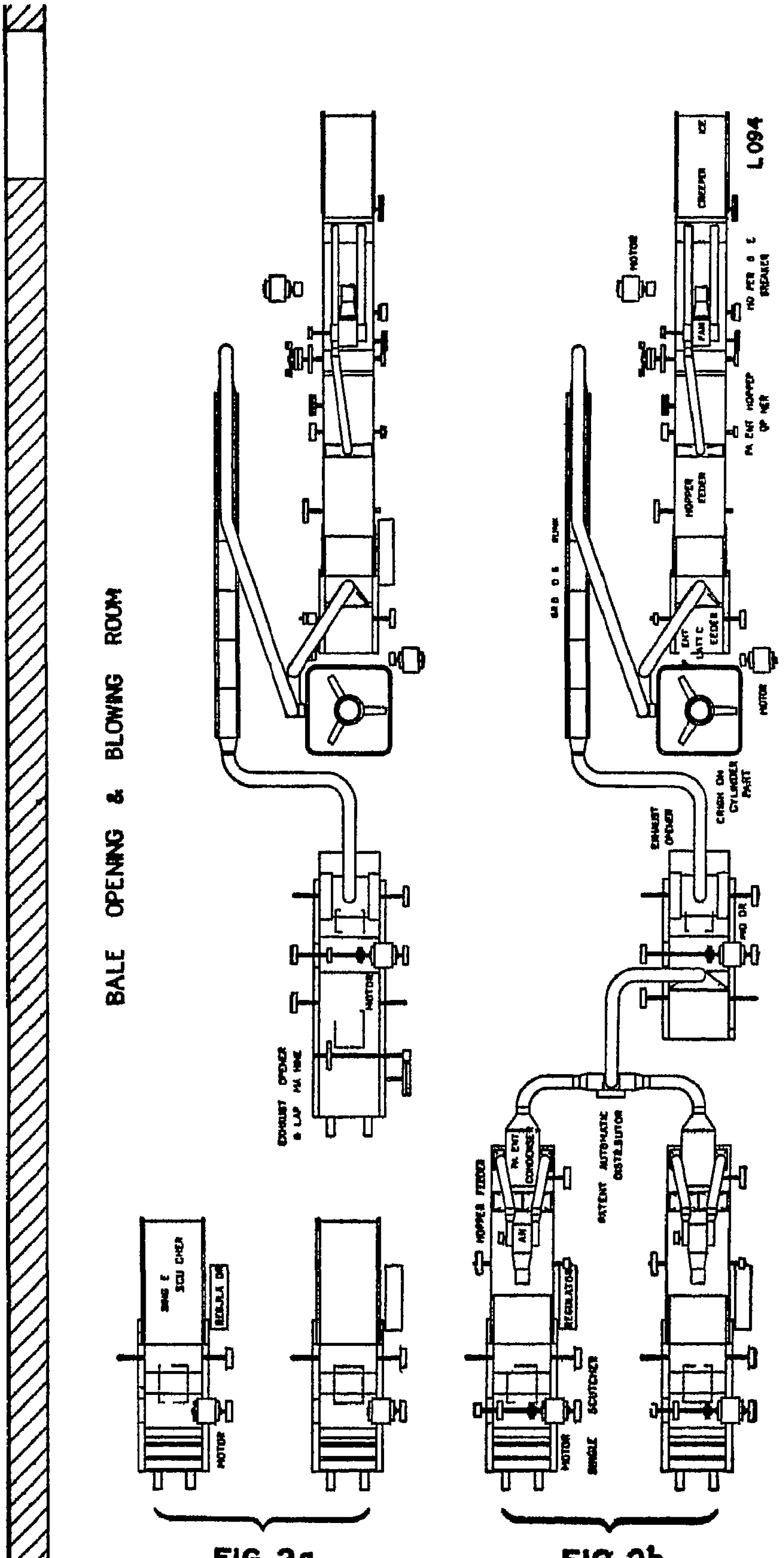


FIG. 2a **FIG. 2b**

Plans showing Conversion to Single Process System —Platt Bros & Co Ltd.

The Howard & Bullough single process combination, illustrated, comprises a bale opener with extended feed lattice, a hopper feeder, double porcupine opener with upstroke cylinders and Shirley cages, Crighton opener, dust trunks, cage exhauster, hopper feeder with reserve bin (as already described), scutcher and lap machine The hopper feeder which receives the cotton from the bale opener is of special construction, embodying many of the features of the bale opener, as is essential at this early stage in the treatment of the cotton The upstroke cylinders are so designed and constructed in relation to the speeds of beating and of feed roller movement that every fraction of the total width of cotton is struck by the hardened blades for every eighth of an inch delivery The "Shirley" dust extracting cage is introduced several times in the combination, and as a result a considerable amount of dust is extracted from the cotton

Taylor, Lang's single process system for medium American cottons consists of the following sequence of machines —

Hopper bale opener, Crighton opener, dust trunks, porcupine hopper feeder, porcupine opener with dust extracting cage, pneumatic conveyor, dual feed apparatus feeding to two hopper feeders with scutchers and lap machines

There are several special features of this combination The Crighton opener and the porcupine opener are each fitted with a special cage delivery so arranged that the cotton passes *over* the single cage, which thus presents a maximum area for dust removal The dual feed device consists of an improved pneumatic conveyor which draws the cotton from the preceding machine and deposits it in a short trunk Below this trunk are two short lattices supplying the two hopper feeders In the trunk between the conveyor and the lattices are two valves each controlled by a balanced tray in the reserve box of the corresponding hopper, and therefore, automatically distributing the cotton according to requirement

CONVERSION OF THE EXISTING PLANT TO THE SINGLE PROCESS SYSTEM

It is possible in many cases to convert an existing blowing room plant, with separate scutchers, to the single process system with relatively little trouble and at low cost A modification of this character is shown in the illustration The plan Fig 2A shows the installation before the alteration, consisting of an exhaust opener combination and two separate scutchers Fig 2B shows the conversion to Platt s single process system The lap-forming mechanism has been removed from the exhaust opener, and a delivery trunk substituted This leads to the automatic distributor where the cotton is directed as required into the two hopper feeders which have been coupled to the scutchers Each hopper is fitted with a condenser and feed reserve box to ensure even delivery of the cotton to the scutcher

STAGGERED DUST TRUNKS

John Hetherington & Sons have recently introduced a new form of dust trunk in which the sides of the trunk are fitted with grid bars, in addition to the usual bars along the base of the trunk. These sides are also staggered, forming a zig-zag path when viewed in plan, so that the cotton impinges against these side bars and additional cleaning is obtained. Side panels are fitted to facilitate the removal of impurities ejected through the side bars, and the trunk is so constructed that the whole of the interior bar section is removable for cleaning.

PNEUMATIC FEED FOR OPENERS

One of Taylor & Lang's latest developments for opening machinery is a pneumatic feed in which the principal feature is a cage which revolves at a higher speed than the ordinary condensing cage. The result is that although the cage functions as a condenser it is also an effective dust remover. The cotton is drawn through trunks from the preceding machine to the cage, where only a thin film of cotton collects owing to its high peripheral speed, thus facilitating the extraction of dust and fine impurities which are drawn into the cage by suction. The cage is fitted with an internal damper plate, so that a revolving stripper roller can remove the cotton at a point where it is released from the suction. The cotton is then delivered across the entire width of the passage leading to the opener cylinder, no feed rollers being required. The arrangement is applicable to the single process system, and can be used at several points in the combination according to requirements.

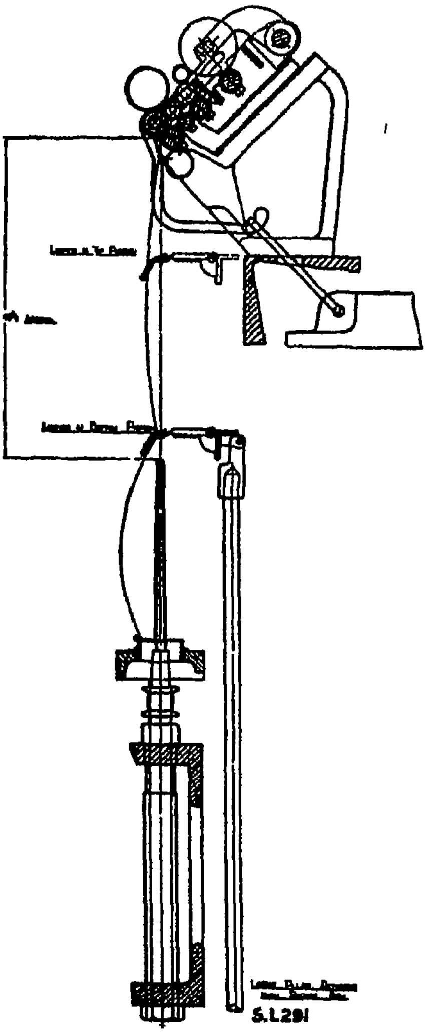
CARDING MACHINES

The "Shirley" card, introduced by the British Cotton Industry Research Association, and constructed by Platt Bros. represents the only radical change made in carding machines within recent years. The machine was developed as the result of research which showed that it was possible to card cotton efficiently with considerably fewer flats than were used on the usual machine. The "Shirley" card is a much smaller machine, the cylinder and doffer diameters being respectively 40 ins. and 20 ins. diameter, and there are only 48 flats instead of the 106 to 110 generally used. Actually only 13 to 14 flats are in working position, whereas the ordinary card carries 39 to 40 in this position. Thorough tests under working conditions have shown the card to give as good results both in the regard to quality and output as the larger machine, although there is a saving in floor space of about 6 sq. ft. on each machine. The height of the card is about 1 ft. 2 ins. less than the ordinary card, giving greater accessibility to the machine and better facilities for supervision.

Howard & Bullough have introduced a cylinder stripping eliminator for cards, consisting of a wire covered roller mounted below the taker-in, set so that the wire teeth penetrate into the cylinder clothing teeth about $\frac{1}{64}$ in. to $\frac{1}{32}$ in. This roller rotates at a surface speed about 20 per cent. in excess of that of the cylinder, and its action is such that "stripping out" is practically eliminated. The advantages are a reduction in waste losses, increased production, and a more regular sliver, since the variations due to stripping are eliminated. There is also a saving in labour due to the abolition of the stripping out operation which normally takes place twice to four times a day.

The maximum advantages of the device are only obtainable when it is used in conjunction with special doffer clothing now available which does not require stripping. With this combination, neither cylinder nor doffer requires stripping over long periods.

An ingenious grinding machine has been introduced by Messrs. Dronsfield Bros. Ltd. It is essentially a "side" grinder and is, of course, for employment and use in the mills. The machine is entirely automatic. In addition to traversing to and fro across the card in the same manner as an ordinary surfacing traverse wheel grinder, the feeding-in of the emery wheels and the withdrawal of same are both automatically controlled by a special motion. Thus after setting in position and starting to grind the machine may be left to its own devices.



Vertical Ring Frame.—Platt Bros. & Co. Ltd.

DEVELOPMENTS IN RING SPINNING MACHINERY. A NEW WEFT RING FRAME.

Platt Bros. have recently introduced a new weft ring spinning frame which embodies several new features, the most important being the arranging of the drawing rollers in such a position that the periphery of the bottom front roller is vertically over the centre of the line of spindles Thus the yarn leaves the front rollers and passes directly down to the thread wire and the twist is free to pass upwards to the nip of the rollers The lappets move with the rockers *which operate the ring rail pokers, and can be regulated* so that the balance of the balloon is correctly maintained throughout the lift The rollers are inclined 45°, and can be arranged either for ordinary or high drafting The fact that the yarn is relatively free within the thread wire, and not, as in ordinary ring frames, pressing at an angle against one side of the thread wire, causes a definite vibration to take place in the yarn above the thread wire, this being due to the ballooning influence below the lappet This has a 'fulling" effect on the yarn, giving it a mule characteristic which is further accentuated by the fact that much softer twisted yarns can be spun on the machine due to the free flow of twist towards the rollers

Sample fabrics woven from yarns spun on this machine and compared with fabrics spun from mule yarns made with the same cotton have been almost indistinguishable For hosiery, yarns have been spun on a machine with 9 ins lift and 2½ ins ring with twist multipliers of 2 5 and 2 6

COMPENSATING MOTION

Another notable improvement introduced by the same firm is a compensating motion, which eliminates the taper in cops spun on paper tubes on ring frames, and produces a cop with perfectly parallel sides The effect is obtained by an automatic, graduated shortening of the chase as the cop builds up The motion can be applied with little trouble or expense to existing machines It is adjustable, and can be altered to suit various sizes of rings and lifts The chief advantage of the device is that a greater length of yarn can be wound on the cop without altering the size of the ring or the length of the lift

AUTOMATIC SCAVENGER

Another application to the ring frame by Platt Bros is an automatic scavenger, which cleans the top boards and lappets at regular intervals The arrangement consists of two wires extending along each side of the machine, one wire guiding a metal plate covered with felt, the other guiding a brush The metal plate traverses over and cleans the lappets, whilst the brush cleans the top boards and roller beam The clearers are traversed by means of bands driven from the front roller and the headstock The application of this cleaning arrangement enables the operatives to tend a greater number of spindles

LARGE PACKAGE SPINNING

Most textile machinists are now making ring spinning frames for the production of large packages to meet the requirements of the coarse spinning trade, the tyre yarn manufacturer, and the hosiery industry, by extending the lift and increasing the diameter of the ring In order to operate these machines at satisfactory speeds, it is essential that the spindles and rings are of the highest quality Various improvements in the spindles and spindle bearings, and in the finish, hardness, and concentricity of the rings have contributed to the success of large package spinning

Lifts ranging from 8 ins to 10 ins , and ring diameters from 2 ins to 3½ins are fairly common, and weights up to 1 lb of yarn are spun on the bobbin The lappets are usually the lifting type, and can be adjusted to vary the length of lift according to the total lift of the ring rail Knee brakes are sometimes fitted to the spindles to facilitate piecing

Twice to three times the length of yarn normally spun on a bobbin is spun on these larger bobbins, and apart from the advantages of fewer doffings, and less knots in the yarn, there is a very considerable saving in the subsequent winding costs, since a winding operative is able to tend more spindles and so obtain an increased production

HIGH DRAFT SPINNING

Special applications for increasing the draft in drawing rollers, or, as they are termed "high-draft systems," have now become practically a standard equipment on ring frames, each maker usually specializing on one particular arrangement, although usually prepared to apply other systems to his machine Although upwards of 200 patents for high drafting have been taken out, the systems in actual use are relatively few Probably the system most used is the four roller system, which is well known No outstanding development of any particular high draft system has taken place within the last few years

MULE SPINNING

Asa Lees, of Oldham, have introduced a two speed driving arrangement for cotton mules, with the application of a free wheel in the headstock It is specially suitable for fine spinning, where results have shown that not only is there an increase in production, but the yarn is actually stronger and more regular

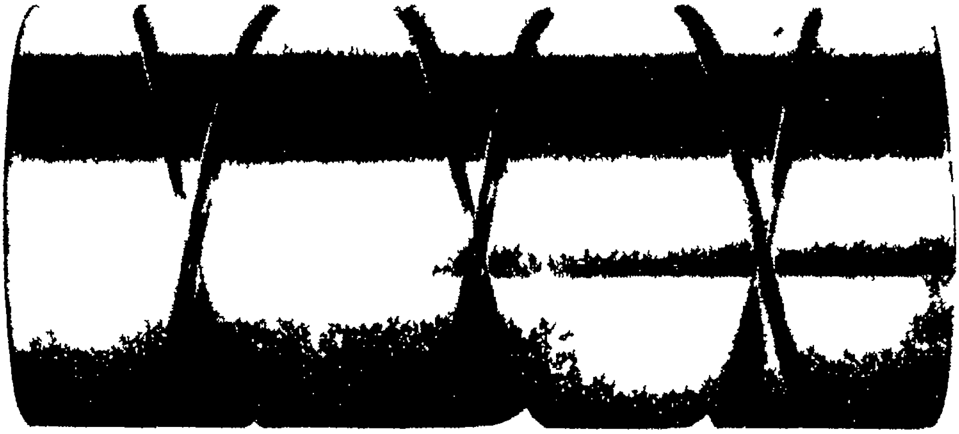
The slow spindle speed operates for not more than one-third of the outward run of the carriage, whilst the remaining two thirds of the run is completed at the higher speed The higher speed is about 25 per cent greater that the lower speed Results on 100's showed stronger yarns and 10 to 15 per cent increased production

The same firm also make an automatic nosing motion for mules, which operates through a cam With this mechanism the nosing action is controlled with scientific exactness, the cam being machined to the correct shape to give the necessary acceleration to the spindle The action is fully automatic, each outward run of the carriage producing the requisite adjustment, and at doffing time the operation of turning back the shaper also re-sets the nosing motion The device is simple and effective, and as all the force exerted in nosing is absorbed by the cam, there is no strain or reaction on the shaper The nosing cam can be changed to provide the finest adjustments, hence well-built cops with perfect noses can be made to any size and from the coarsest to the finest yarns

DOUBLING —THE DISC DOUBLER

The disc doubler, sometimes known as the "double twisting machine," although not new in principle, has only recently been developed to a practical success The best-known example is that invented by T E Andrew and M Langstreth, of Dunlop Cotton Mills Ltd , and made by Tweedales & Smalley, of Castleton, Rochdale

The supply consists of a multiple wound cheese which is carried on a balanced cradle, this cradle being an important feature of the machine The yarn is withdrawn from the side of the cheese, passing through a tube, emerging at the side of this tube to pass along the face of a disc, and through a hole near the periphery of the disc The yarn is then taken over the edge of the disc, and at this point it passes back to the rollers, thence upwards to frictionally driven flanged bobbins The tube and disc rotate and are the actual twisting units, causing the outer portion of the loop of yarn to rotate round the inner portion Thus neither supply package nor delivery bobbin is rotated to insert twist, there are no ring and traveller troubles, no snarl formation even with excessively high twist, the package is delivered containing 4¼ lbs of yarn which does not require re-winding, being ready for the cabling machine, and, owing to the method of twisting, two turns of twist are inserted for one revolution of the disc, saving power and reducing production costs

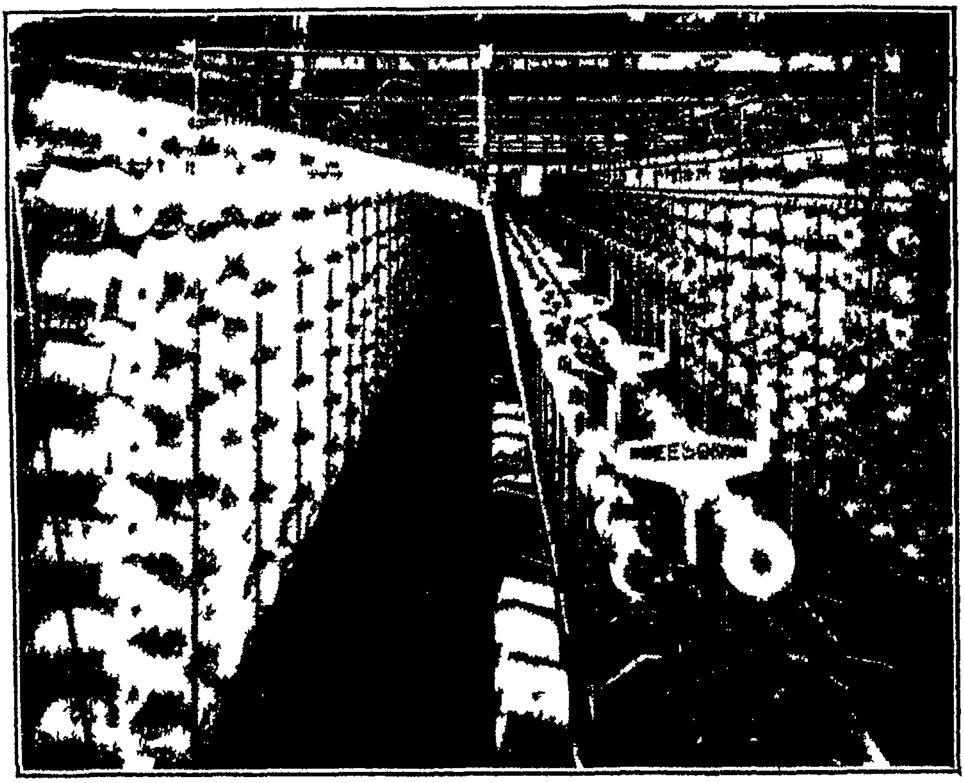


The Rotary Guide Roll —Universal Winding Company

"ROTARY GUIDE" WINDING

An outstanding development of recent years in winding machinery has been the introduction of the system of traversing the yarn by means of the grooved roll, or what is known as the "rotary guide" This feature is embodied in the Universal Winding Company's No 40 winding machine for winding cotton, worsted, linen and other medium or fine yarns into the form of cylindrical or conical packages on wood, paper or other types of centres, at high speeds

The rotary guide consists of a roll on the periphery of which a continuous helical groove forms a right- and left hand spiral The cylindrical or conical package on which the yarn is being wound is held in contact with this roll, which rotates about a horizontal axis, and whose function it is to drive the package by friction at the requisite speed The yarn passes from the supply bobbin through a slub-catcher and tension device, over a hinged bail which acts as a detector for the stop motion, and finally passes into the helical groove of the rotating roll This groove thus operates as a yarn guide, traversing the yarn rapidly to and fro across the face of the roll After remaining in the groove for rather less than a quarter of a revolution the yarn leaves the groove and is wound on the package at the point where the latter is in contact with the roll Thus the roll functions both as the yarn traversing guide and as the driver of the package The crossing places of the groove are specially formed so that the yarn cannot pass into the opposite helix until it has made the complete traverse in one direction Differences in depth of groove at these crossings and



Multiple Winding Machine with Magazine Cone Creels — Universal Winding Company

chamfered sides to the grooves have been carefully designed to obtain correct operation in this respect

The elimination of all reciprocating mechanism brought about by the adoption of this form of traverse achieves several important results The most obvious is a greatly increased winding speed, due to the fact that in the usual type of high speed winder, the limitations operating against the adoption of higher winding speeds are imposed by the speed restrictions inherent in all reciprocating mechanisms

The rotary guide winding machine may be used for winding parallel cheeses, cones as a supply for high speed warpers, or cones for the knitting and hosiery trades

WINDING FOR DOUBLING

The " dual process " system of preparing yarns for doubling, in which the yarn from the spinner's cop or bobbin is first wound single end on to cones, then multiple wound from cone to cheese, is not new. A recent development of the system, however, is worthy of notice. This is the application of a magazine cone creel to the multiple winder. The system has been devised particularly for tyre yarns for four- and five-end winding.

The creel, which is constructed in a similar manner to the well-known magazine cone creel for high-speed warping, is separate from the winding machine, being built up from the floor in two long rows, one on each side, parallel with the machine, and with alleyways between. For five-end winding the creel is ten rows high, there being five working cones and five reserve cones to each drum of the winding machine.

The operative winder works in the alleyways between creel and machine, and attends to yarn breakages, and full cone doffings. Another and lower-paid operative attends to the replenishment of the creel, tying the reserve cones to the working cones.

TWISTING FROM MULTIPLE-WOUND CONE.

A further modification, also for tyre yarns, consists in placing multiple-wound cones in the creel of the twisting machine, and utilizing the magazine principle. For example, for five-fold twisting the yarns are prepared by the dual process system, but the five ends are wound on a cone instead of a parallel cheese, and this is placed in a special creel on the twister, the base of each cone facing outwards. The five ends are withdrawn over the end of the cone, pass through a tension device, such as a ball drag, and so to the delivery rollers of the twister. The advantages of the arrangement are that the yarn is maintained at a uniform tension throughout, and production per operative is increased. On 5/23s a cone lasts from 30 to 40 hours in the creel, and one girl can attend to the creeling of 36 sides of 80 spindles each, or 2,880 spindles in all. Each cone contains about 4½ lbs. of yarn, providing a greater length than the ordinary small barrel beam contains, and there is less waste than obtains where the twister supply is on beams, since the lengths of yarns on a beam vary due to broken ends, and a broken end on one side of the machine usually causes a break on the opposite side due to the tangling of the loose end before detection. Tests have also shown an improved regularity of yarn strength and elasticity with cone twisting over the beam twisting system, whilst production is greater by over 3½ per cent. because there are no stoppages for creeling.

WINDING MACHINE WITH MAGAZINE SUPPLY TURNTABLE.

A recent development in multiple winding is that of providing a circular table for the supply bobbins, arranged for magazine creeling. A bunching motion on the ring frame winds a few coils of yarn at the bottom of each bobbin, so that the beginning end of one bobbin can be tied to the finishing end of the next bobbin at the winding machine. The bobbins are placed on holders fitted to the turntable mounted on a vertical pivot. This turntable also carries disc tensions and guides for ten ends. In addition, there is provision for two reserve bobbins to each end, so that in all the turntable is capable of carrying thirty ring bobbins arranged in groups of three, for tying together as already explained. The turntable can be rotated through almost the complete circle of 360°, and this arrangement enables the creeler to replenish the supply and tie the ends with facility Further, each set of three bobbins is also rotatable on its own axis, so that the bobbins can be brought to the easiest position for tying After passing through the tensions the ends, still separate and distinct, are guided to the detector wires of the stopping mechanism, which is positive and quick in action, being driven by chain from the cam shaft Leaving the detector wires, the ends pass upwards to concave runner bowls, termed "Diabolo" tension distributors, there being one bowl for each group of five ends The ends make one complete turn round the bowl, and then go upwards again to standard runner bowls before passing down to the traverse

The function of the "Diabolo" device is to bring the separate ends together in close formation soon after they leave the detectors This close formation is subsequently maintained, with the result that there is little possibility of yarn breakage after the ends leave the diabolo, owing to their mutual cohesion Any breakages will therefore tend to take place whilst the ends are still separate and spaced Thus the spindle will stop through the action of the detectors before the broken end reaches the package, so obviating turning back and the formation of bunch knots

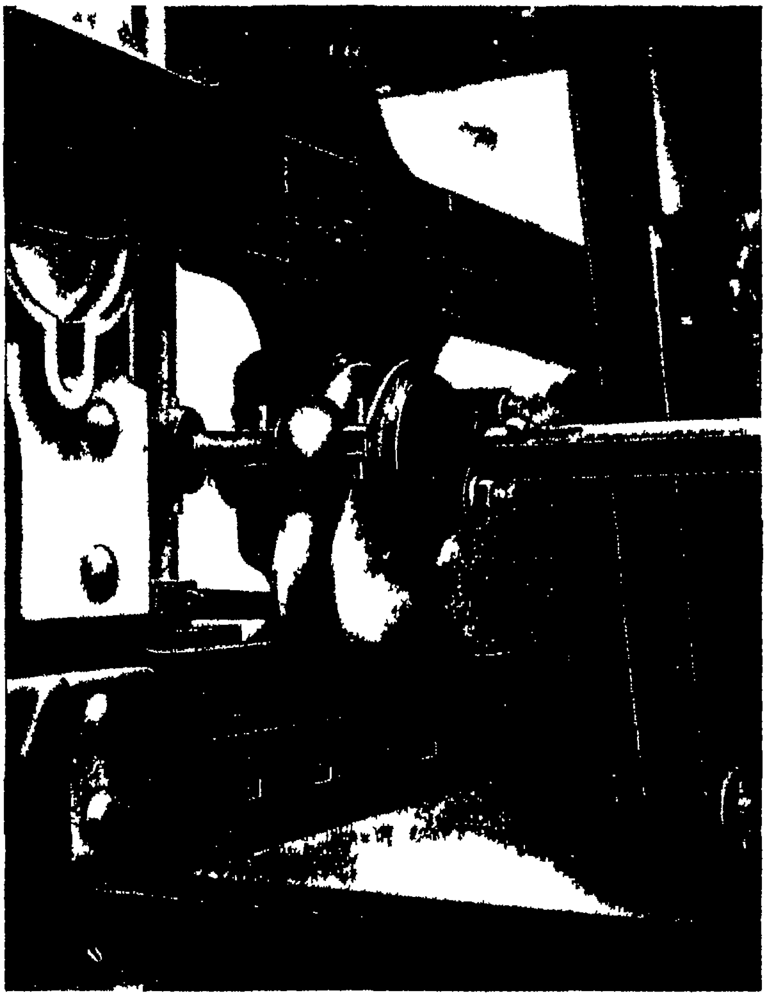
Although built as a single head or unit complete with supply turntable, it is usual to arrange a number of heads on a bed, each head driven by belt from an undershaft Although applicable to various systems of doubling, the machine has been more particularly developed by the makers the Universal Winding Company, in conjunction with Dunlop Cotton Mills Ltd , Rochdale, to provide packages for the "disc doubler," already described, and in this case provision is made for winding two cheeses of the requisite dimensions per spindle

LOOMS

In actual loom practice there is not very much that is of outstanding importance The Gledhill loom, primarily designed for the production of worsted fabrics, is stated to be planned also for the production of cotton fabrics It is on the same principle as the original Seaton loom, introduced some 30 years ago, inasmuch as the essential principle consists in the employment of weft carrying arms or the like which enter the warp shed from either side, and meeting in the middle convey the pick of weft from one to the other The Gabler loom is of the same type, and is well known on the Continent

Messrs Platt Bros & Co Ltd have recently improved their plain calico loom Their customary robustness of construction has been still further increased, and several improvements relating to the lathe, take-up motion, and the let-off motion have been added The most important feature is the new picking motion Many advantages, particularly smooth action, are claimed The picking cam is of even shape with a round nose having a "machined" track in which runs a spherical picking bowl This bowl lies on the same horizontal centre line as the picking cam, working smoothly and providing the necessary acceleration to the shuttle The cam is made in halves, which permits its fitment to the loom without disturbing the tappet shaft in any way The bottom of the concentric half of the cam is standard for all reed spaces The strength of the pick can be adjusted if required by simply moving the position of the cam a little on the tappet shaft

Narrow fabric looms have been improved very considerably during recent years One of original design was recently introduced by Taylor Lang & Co Ltd It is of all metal construction, even including the shuttle The shuttle driving mechanism consists of a rack and pinion, the basis of the reciprocating motion being a fabroil rack gearing with cut steel pinions The beat up motion is novel and forms the subject matter of letters patent



New Picking Motion for Loom —Platt Bros & Co Ltd

The usual simple crank motion is caused to actuate a slide block working in a semi circular slot at the end of the beat up levers which carry the slay The effect of the arrangement is to give the slay an unusually long dwell in order to allow the shuttles ample time to cross the shed without fear of catching the warp threads The let off motion is designed to effect perfect compensation and thus secures even tension, and also to provide a release when stress is put upon the warp threads during the changing of the shed There is no need in this loom to change any gearing to alter the take-up. The take-up motion is driven through a double-clutch arrangement, and simply by altering the position of a link which connects the beat-up arm to the lever actuating the take-up motion itself, any desired number of picks per inch from 20 to 120 can be obtained without—as stated—any change of gear.

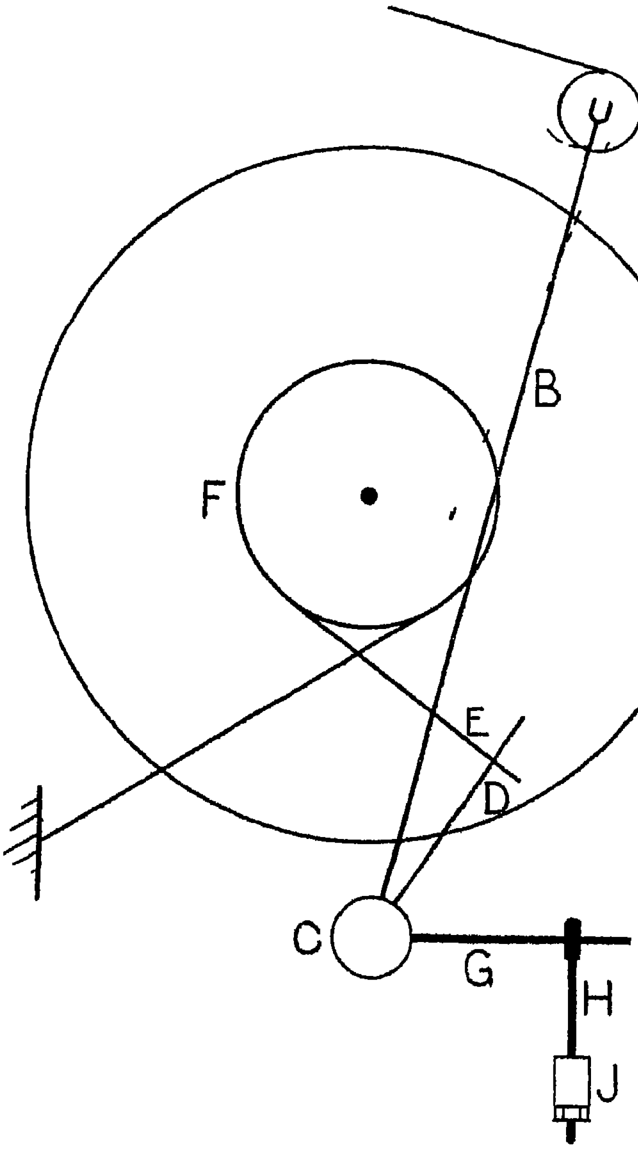
There have been a number of improvements relating particularly to provision of means as applied to looms whereby weft can be mixed in order to avoid the defect of "barriness."

An interesting development is the employment of a circular box in combination with a weft feeler whereby a plain loom can be rendered semi-automatic. George Keighley Ltd., of Burnley, have introduced such a loom. By their special arrangement the loom runs without stopping for weft for six cops—that is, usually an hour or more. The loom is stopped on the exhaustion of all the shuttles, and it is said that the refilling of the six shuttle boxes and restarting the loom will only occupy one minute. The weaver's actual time in re-shuttling is, therefore, only about one minute per hour per loom. Refinements in loom structure are to be noted, particularly the increasing use of all-metal for the various loom parts. Large-diameter warp beams and roll of cloth for long pieces or greater weaving efficiency, loom signals to indicate stoppage of looms and so assist the weaver when minding a large number, are improvements introduced by the British Northrop Loom Co.

AUTOMATIC CONTROL OF WARP TENSION IN WEAVING.

Negative let-off motions are common. They are simple, cheap, and to a degree effective, but they do not control or maintain constant warp tension from the beginning to end of a beam without attention. A recent invention emanating from the British Cotton Industry Research Association combines the merits of the frictional principle with those of automatic mechanism.

It consists essentially of a floating roller round which the warp sheet passes on its way to the healds, and it is the alteration in position of the warp sheet as it passes from the beam to this floating roller that effects the reduction in frictional weighting of the let-off. The floating roller is carried by arms which are rigidly connected to a shaft, the said shaft also being attached to the chain arms which carry the chains passing round the beam ruffles. The weight arm runs out horizontally from the shaft, and is connected by an eye bolt to a weight lever running parallel to the shaft. The weight lever is pivoted to the loom frame and carries sliding weights. The general method of operation is quite simple. The weights on the weight lever act through the screw on the horizontal arm, and tend to turn the shaft which carries the chain arm in a clockwise direction. This tensions the chains and so sets up frictional forces between the chains and the ruffles, as in an ordinary let-off. The chains do not, however, bear the whole of the applied weighting. Part of it is borne by the sheet of warp passing over the floating roller. As the beam weaves down, the portion of warp sheet between the beam and the roller changes in direction, so that its pull on the roller is increased and the tension of the chains, and therefore the frictional resistance, are diminished. The motion thus produces quite automatically a diminution of the chain tension as the beam weaves down The motion is designed so that the degree of slackening is just correct at every stage of the weaving Thus,



A—Floating Roller B—Arm C—Shaft D—Chain Arm E—Chain
F—Beam Ruffle G—Weight Arm H—Eye Bolt J—Weight Lever

Diagram showing Principle of Mechanism for Automatic Control of Warp Tension in Loom

if the total tension of the two chains was 160 lbs when the diameter of the beams was 16 ins it would be 150 lbs when the diameter was 15 ins , 140 lbs when it was 14 ins , and so on until, with a barrel diameter of 4 ins the chain tension would be finally reduced to 40 lbs

This automatic warp tensioning control is now manufactured by William Dickinson & Sons Henry Livesey & Co Butterworth & Dickenson, and George Keighley Ltd

On the Determination of the Acid Content of Finished Cotton

By Ing. Dr. SCHWERTASSEK and
Ing. JOSEF HORATSCHKE

Report from the Textilforschungs- und Konditionierungsanstalt Reichenberg

SINCE exact knowledge of the acid content of cotton yarns or fabrics is often of importance, scientific investigations have been carried out in this direction. Summarizing the results of this work up to now, we have to report as follows:—

Damaged cottons (containing oxy- and hydrocellulose) show a certain consumption of lye when titrated directly, in presence of the material, but this is not the case with properly bleached goods. Similarly, damaged goods retain acids more strongly than those treated properly. With properly treated goods, therefore, direct titration, as well as titration of an aqueous extract, is quite feasible, whilst, with damaged material difficulties stand in the way of an exact determination. If we work with aqueous extracts, it may happen that a part of the acid is retained by the fibre and the values will thus come out too low, whilst with titration in presence of the material, too high values are generally obtained, since damaged material consumes the soda lye to some extent.

With the oxydized and acid damaged cotton material tested by us we always obtained a considerable self consumption of soda lye to the value of about 0.1 c.cs. $\frac{N}{10}$ of lye per gramme of substance, which is of significance when trying to arrive at an exact determination of acid content.

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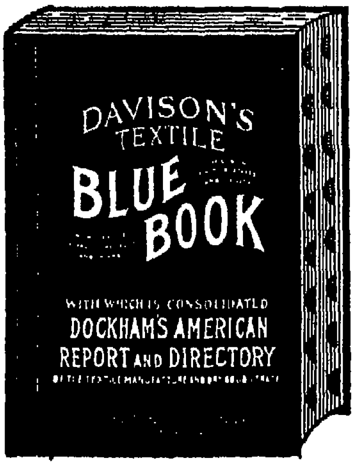

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The Cotton Industry of Czecho-Slovakia.

The following is extracted from a report on the Economic Conditions in Czecho-Slovakia (March, 1933), written by Mr. H. Kershaw, O.B.E., Commercial Secretary to H.M. Legation at Prague:—

Cotton Spinning.—On December 31, 1932, there were in Czecho-Slovakia 3,620,000 spindles for the spinning of Indian, American, Egyptian or similar cotton yarns. Six or seven mills alone spin Egyptian cotton. Of this total number some 650,000 spindles are out of commission, and the remainder are in use at an average of 70 per cent. of capacity. The production of yarns in 1932 may be estimated at about 66,000,000 kilograms, of which some 25 per cent. was exported, and the remainder worked up or consumed locally. By far the larger proportion of the spindles are employed in spinning American cotton up to 36's twist and 42's weft, and Egyptian cotton up to 80's in twist and 100's in weft. No outstanding technical developments have taken place owing to the prevailing depression. The exports of cotton yarn in 1932 amounted to 15,877 tons, value Kc 203,000,000, compared with 26,369 tons, value Kc 267,000,000 in 1931. It is to be noted that up to 1930 Czecho-Slovakia was, after Great Britain, the largest exporter of cotton yarn (coarse counts), since which date, however, she has been overtaken by Italy. In consequence of the severe shrinkage in trade Czecho-Slovak spinners agreed almost unanimously in 1932 to co-operate more closely, especially in regard to the home market. As a preliminary step production and the home market were allotted on a basis of contingents, and inland prices of yarns stabilized. Import contingents of raw cotton in connection with foreign exchange certificates were fixed soon after the restrictive regulations came into force. These regulations were eventually rescinded.

Cotton Weaving.—Imports of raw materials for the cotton industry continued their downward curve during the greater part of 1932, reaching the lowest point recorded since 1924 and then improving slightly. These imports were about 20 per cent. less than in 1931—by no means a normal year—and 40 per cent. below the level of three years ago. The aggregate export of the cotton mills was 56 per cent by volume and 71 per cent by value less than the average of the previous four years and the recovery noticeable towards the end of 1932 has not been sustained Export trade has declined in all directions Taking export markets separately the shrinkage was in no case less than 50 per cent, while in the case of Austria and Germany the reduction was 76 per cent and 68 per cent respectively (Austria, the principal buyer of Czecho-Slovak textiles, is by reason of its geographical position an important distributor of Czecho Slovak manufactures) Sales to Great Britain were reduced by no less than 84 per cent, attributable mainly to the effects of sterling exchange combined with the new customs duties, whilst trade with Hungary (with whom the absence of a commercial treaty and the continuance of a Customs war are serious factors) declined by 94 per cent and with Jugo-Slavia 70 per cent These percentages are based on quantities, and the position is still less satisfactory if the further fall of about 25 per cent in value is taken into account

Apart from financial losses which Czecho Slovak textile manufacturers have suffered through the change in the external value of sterling, that exchange factor and the linking of other currencies to sterling have raised serious barriers against this country's foreign trade, and the loss of trade due directly and indirectly to these circumstances is undoubtedly one of the principal causes of Czecho-Slovakia's export of cotton tissues having fallen to about one-third of the level of the previous year Another harassing factor is the increasing competition from Italian and Japanese manufacturers, the former having displaced Czecho Slovak goods to some extent in South European markets, whilst in those and in overseas markets Japanese goods have appeared at prices with which the Czecho-Slovak mills, whose costs must, of course, be calculated on a gold standard basis, are virtually unable to compete

The conflict between agrarian interests on the one hand and manufacturing interests on the other is in no branch of production more pronounced than in the case of the textile industry Normally the Czecho-Slovak cotton mills rely extensively on neighbouring countries, especially the Succession States Some of these countries are now developing competing industries of their own, and are increasingly unwilling to take large quantities of textiles from Czecho-Slovakia unless this country in return is prepared to grant facilities for the import of farm produce, a condition to which Czecho-Slovak agriculturists are opposed in their own special interests Nevertheless, Czecho-Slovakia by sheer weight of competitive ability exports very largely to those markets, but in view of their own difficulties those countries are curtailing, in one shape or another, imports of textile goods, with the result that Czecho-Slovakia's sales of textiles in 1932 to the five countries, Austria, Hungary, Jugo-Slavia, Roumania and Bulgaria, amounted to only Kc 860 million, or about half the quantity of the previous year, and a considerable portion of this business was only possible as the result of “compensation” schemes Moreover, assets resulting from the sale of goods to those markets cannot be readily transferred owing to exchange difficulties The loss of trade in that direction is a serious matter for the Czecho-Slovak textile industry, since normally about 40 per cent of the whole output is marketed in the countries in question The home market has provided no compensation for the reduction in export business Even under normally prosperous conditions the domestic market is not able to consume more than about one tenth of the output of textiles, but it is now at a very low level, and eagerness for business has led to serious price-cutting

U.S. Cotton Textile Code.

THE cotton code drawn up by the Cotton Textile Institute of New York was signed by President Roosevelt on June 11 The President, in signing, suggested that the minimum wage provided under the code was not large enough, but he expressed the hope that the question would be reopened later and that the main object was to get the code working as soon as possible

The first code submitted by the employers stipulated a minimum wage of $11 per week in the Northern and $10 in the Southern mills for a 40-hour week, but Mr William Green, President of the American Federation of Labour, and a member of the Labour Advisory Board of the National Industrial Recovery Act, demanded a minimum wage of $15 per week and a 32-hour working week

In its final form, the code

Abolishes child labour under the age of 16 years

Fixes minimum weekly wages at $12 per week in the Southern section and $13 per week in the Northern section

Provides for a maximum working week of 40 hours

Limits the working of machinery to two shifts of 40 hours each per week

Sets up a "planning and fair practice agency" for the industry to assist the administrator

This last body is to make recommendations for the close control of the industry, the registration of firms, the licensing of new machinery, and so on, with the aim of preserving "a balance of productive activity with consumption requirements"

The following is the text of the code of fair competition for the cotton textile industry as presented on June 19 —

To effectuate the policy of Title I of the National Industrial Recovery Act, during the period of the emergency, by reducing and relieving unemployment, improving the standards of labour, eliminating competitive practices destructive of the interests of the public, employees, and employers, relieving the disastrous effects of over-capacity, and otherwise rehabilitating the cotton textile industry and by increasing the consumption of industrial and agricultural products by increasing purchasing power, and in other respects, the following provisions are established as a code of fair competition for the cotton textile industry —

DEFINITIONS

I The term "cotton textile industry" as used herein is defined to mean the manufacture of cotton yarns and/or cotton woven fabrics, whether as a final process or as a part of a larger or further process

The term "employees" as used herein shall include all persons employed in the conduct of such operations

The term 'productive machinery" as used herein is defined to mean spinning spindles and/or looms

The term "effective date" as used herein is defined to be July 17, 1933, or, if this code shall not have been approved by the President two weeks prior thereto, then the second Monday after such approval

The term "persons" shall include natural persons, partnerships, associations, and corporations

WAGES AND HOURS

II On and after the effective date the minimum wages that shall be paid by employers in the cotton textile industry to any of their unskilled employees—except learners during a six weeks' apprenticeship, cleaners, and outside employees—shall be at the rate of $10 per week when employed in the Southern section of the industry and at the rate of $11 per week when employed in the Northern section for forty hours of labour [These rates are modified by the amendments]

III On and after the effective date, employers in the cotton textile industry shall not operate on a schedule of hours of labour for their employees — except repair shop crews, engineers, electricians, firemen, office and supervisory staff, shipping, watching and outside crews, and cleaners—in excess of forty hours per week, and they shall not operate productive machinery in the cotton textile industry for more than two shifts of forty hours each per week

PERIODICAL REPORTS

IV With a view to keeping the President informed as to the observance or non observance of this code of fair competition, and as to whether the cotton textile industry is taking appropriate steps to effectuate the declared policy of the National Industrial Recovery Act, each person engaged in the cotton textile industry will furnish duly certified reports in substance as follows and in such form as may hereafter be provided

(*a*) *Wages and Hours of Labour* Returns every four weeks showing actual hours worked by the various occupational groups of employees and minimum weekly rates of wages

(*b*) *Machinery Data* In the case of mills having no looms, returns should be made every four weeks showing the number of spinning spindles in place, the number of spinning spindles actually operated each week, the number of shifts, and the total number of spindle-hours each week

In the case of mills having no spinning spindles, returns every four weeks showing the number of looms in place, the number of looms actually operated each week, the number of shifts, and the total number of loom-hours each week

In the case of mills that have spinning spindles and looms, returns every four weeks showing the number of spinning spindles and looms in place, the number of spinning spindles and looms actually operated each week, the number of shifts, and the total number of spindle-hours and loom-hours each week.

(*c*) *Reports of Production, Sales, Stocks and Orders*: Weekly returns showing production in terms of the commonly used unit—i.e., linear yards or pounds or pieces—stocks on hand, both sold and unsold, stated in the same terms, and unfilled orders stated also in the same terms. The returns are to be confined to staple construction and broad divisions of cotton textiles.

The Cotton Textile Institute, Inc., 320, Broadway, New York City, is constituted the agency to collect and receive such reports.

PRIOR CONTRACTS.

V. Where the costs of executing contracts entered into in the cotton textile industry prior to the presentation to Congress of the National Industrial Recovery Act are increased by the application of the provisions of the Act to the industry, it is equitable and promotive of the purposes of the Act that appropriate adjustments of such contracts to reflect such increased costs be arrived at by arbitral proceedings or otherwise, and the Cotton Textile Industry Committee, the applicant for this code, is constituted an agency to assist in effecting such adjustments.

WORKERS' RIGHTS.

VI. As required by Section 7 (*a*) of Title I. of the National Industrial Recovery Act, the following provisions are conditions of the code:—

"1. That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labour, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection; (2) that no employee and no one seeking employment shall be required as a condition of employment to join any company union, or to refrain from joining, organizing, or assisting a labour organization of his own choosing; and (3) that employers shall comply with the maximum hours of labour, minimum rates of pay, and other conditions of employment, approved or prescribed by the President."

VII. The President may, from time to time, cancel or modify any order, approval, licence, rule, or regulation, issued under Title I. of the National Industrial Recovery Act.

VIII. Such of the provisions of this code as are not required to be included therein by the National Industrial Recovery Act may, with the approval of the President, be modified or eliminated if it appears that the public needs are not being served thereby and as changes in circumstances or experience may indicate.

They shall remain in effect unless and until so modified or eliminated or until the expiration of the Act.

It is contemplated that from time to time supplementary provisions to this code or additional codes will be submitted for the approval of the President to prevent unfair competition in price and other unfair and destructive competitive practices and to effectuate the other purposes and policies of Title I of the National Industrial Recovery Act and which shall not conflict with the provisions hereof

IX If any provision of this code is declared invalid or unenforceable, the remaining provisions shall nevertheless continue in full force and effect, the same as if they had been separately presented for approval and approved by the President

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AMENDMENT PRESENTED BY THE COTTON TEXTILE INSTITUTE

The text of the amendment presented by Mr George A Sloan President of the Cotton Textile Institute, on behalf of the Cotton Textile Industry Committee, on June 30, was as follows —

On and after the effective date employers in the cotton textile industry shall not employ any minor under the age of sixteen years

On and after the effective date the minimum wage that shall be paid by employers in the cotton textile industry to any of their employees—except learners during a six week apprenticeship cleaners, and outside employees—shall be at the rate of $12 per week when employed in the Southern section of the industry and at the rate of $13 per week when employed in the Northern section for forty hours of labour

To further effectuate the policies of the Act, the Cotton Textile Industry Committee, the applicant herein, or such successor committee or committees as may hereafter be constituted by the action of the Cotton Textile Institute, the American Cotton Manufacturers' Association, and the National Association of Cotton Manufacturers is set up to co operate with the administrator as a planning and fair practice agency for the cotton textile industry Such agency may from time to time present to the administrator recommendations based on conditions in the industry as they may develop from time to time which will tend to effectuate the operation of the provisions of this code and the policy of the National Industrial Recovery Act, and in particular along the following lines —

1 Recommendations as to the requirement by the administrator of such further reports from persons engaged in the cotton textile industry of statistical information and keeping of uniform accounts as may be required to secure the proper observance of the code and promote the proper balancing of production and consumption and the stabilization of the industry and employment

2 Recommendations for the setting up of a service bureau for engineering, accounting, credit, and other purposes to aid the smaller mills in meeting the conditions of the emergency and the requirements of this code

CONTROL OF MACHINERY

3 Recommendations (1) for the requirement by the administrator of registration by persons engaged in the cotton textile industry of their existing productive machinery, (2) for the require-

ment by the administrator that prior to the installation of additional productive machinery by persons engaged or engaging in the cotton textile industry, except for the replacement of a similar number of existing looms or spindles or to bring the operation of existing productive machinery into balance, such persons shall secure certificates that such installation will be consistent with effectuating the policy of the National Industrial Recovery Act during the period of emergency, and (3) for the granting or withholding by the administrator of such certificates if so required by him

4 Recommendations for changes in, or exemptions from, the provisions of this code as to the working hours of machinery which will tend to preserve a balance of industrial activity with consumption requirements, so that the interests of the industry and the public may be properly served

PRICE-FIXING

5 Recommendations for the making of requirements by the administrator as to practices by persons engaged in the cotton textile industry as to methods and conditions of trading, the naming and reporting of prices which may be appropriate to avoid discrimination, to promote the stabilization of the industry and to prevent and eliminate unfair and destructive competitive prices and practices

6 Recommendations for regulating the disposal of distress merchandise in a way to secure the protection of the owners and to promote sound and stable conditions in the industry

CREDIT INFORMATION

7 Recommendations as to the making available to the suppliers of credit to those engaged in the industry of information regarding terms of, and actual functioning of, any or all of the provisions of the code, the conditions of the industry, and regarding the operations of any and all of the members of the industry covered by such code to the end that during the period of emergency available credit may be adapted to the needs of such industry considered as a whole and to the needs of the small as well as the large units

8 Recommendations for dealing with any inequalities that may otherwise arise to endanger the stability of the industry and of production and employment

Such recommendations, when approved by the administrator, shall have the same force and effect as any other provisions of this code

Such agency is also set up to co-operate with the administrator in making investigations as to the functioning and observance of any of the provisions of this code, both at its own instance or on complaint by any person affected, and to report the same to the administrator

COMPETITIVE IMPORTS

Such agency is also set up for the purpose of investigating and informing the administrator on behalf of the cotton textile industry as to the importation of competitive articles into the United States in substantial quantities or increasing ratio to domestic production on such terms or under such conditions as to render ineffective or seriously to endanger the maintenance of this code, and as an agency for making complaint to the President on behalf of the cotton textile industry under the provisions of the National Industrial Recovery Act with respect thereto.

Japanese Boycott of Indian Cotton.

The question of the boycott of Indian cotton by the Japanese cotton-spinning mills is dealt with in an interesting pamphlet published by the Jiji Shimpo, entitled "The Abrogation of the Indo-Japanese Commercial Convention and its Effect."

We are indebted for this pamphlet to Messrs. Mitsui & Co. Ltd., Leadenhall Street, London, E.C.3.

The following is an extract from the pamphlet:—

"It (the boycott) has great advantages for the general interest of the country, and it can be carried out without any alteration of the present equipment of the Japanese mills. No doubt, the price of American cotton is somewhat dearer than Indian cotton, and therefore the replacement of the latter with the former raw material means more expense for the country's cotton industry. But this loss is not an unbearable one, when we consider that the practical advantages of the use of American cotton will offset that loss to a considerable degree. In the case of manufacturing cotton yarn of 30's or finer counts, the percentage of raw cotton used is, in general practice, 80 per cent. of American and 20 per cent. of Indian cotton. The loss by non-use of Indian cotton is therefore negligible. Then let us see how much the Japanese manufacturers will lose if they replace Indian cotton with American cotton in their manufacture of yarn of 20's counts, which to all practical purposes is regarded as the standard cotton yarn. On the basis of 30 per cent. of American and 70 per cent. of Indian cotton as required raw material, we can make the following comparative table:—

A.—COST OF COTTON UNDER THE PRESENT SYSTEM.

NOTE.—American Middling at Y48·00 per 100 kin.
Indian Akola at Y40·00 per 100 kin.

Cotton required for making one bale of yarn	350 kin
Middling	30% × Y48·00 = Y14·00
Akola	70% × Y40·00 – Y28·00

(Y14·40 + Y28 00) × 3·5 = Y148·40

Thus the cost of cotton in this case is 148.40 yen.

B.—COST OF COTTON WHEN ONLY AMERICAN COTTON IS USED.

Middling	30% × Y48·00 = Y14·40
Strict low middling	70% × Y45·00 = Y31·85

(Y14·40 + Y31·85) × 3·35 = Y154·93.

Thus, when using American cotton only, it costs 6.63 yen more than in the case of A.

Now, supposing the average count of other heavier yarns to be 14 s, let us make a similar comparison —

A—COST OF COTTON UNDER THE PRESENT SYSTEM

Middling	20	× Y48.00 = Y9.60
Akola	60	Y40.00 = Y24.00
Bengal	20	× Y36.50 = Y7.30

(Y9.60 + Y24.00 + Y7.30) × 3.5 = Y143.15

B—COST OF COTTON WHEN ONLY AMERICAN COTTON IS USED

Middling	10	× Y48.00 = Y4.80
Strict low middling	70	× Y45.50 = Y31.85
Low middling	20	× Y43.50 = Y8.70

(Y4.80 + Y31.85 + Y8.70) × 3.37 = Y152.83

In this case the loss by the use of only American cotton is 9.68 yen.

If all Japanese mills do not use Indian cotton, and replace it with American cotton, we arrive at the following figures —

LOSS PER MONTH

In 20 s yarn	Y6.53 × 70,000 bales = Y457,100.00
In 14 s yarn	Y9.68 × 70,000 bales = Y677,600.00
Loss for one month	Y1,134,700.00

Therefore, 1,134,700 yen × 12 = 13,616,400 yen is the estimated loss for one year. This annual loss of 13,616,400 yen is not irreducible. By virtue of the better quality of American cotton, the manufacturing outturn is increased by at least 23 per cent as compared with Indian cotton. Not merely that, the manufacturing cost of the heavy-count yarn is reduced by 15 per cent. In other words, the present manufacturing cost of 21.50 yen per bale of 400 lbs. is reduced to 18.30 yen, making the total saving on the manufacturing cost of nearly 5,370,000 yen for a year. The advantages of using American cotton are not these alone, for its use increases the strength of the yarn, which, in turn, causes an increased efficiency in weaving into cloths. If all these benefits are added together and subtracted from the possible loss from disuse of Indian cotton, there will be only five or six million yen of loss in boycotting Indian cotton. There are at present, approximately, 8,000,000 spindles in Japan. Therefore, the loss per spindle for a year is only about 75 sen, for two years 1.50 yen.

Purchase by Japan of a vast amount of cotton from America is bound to stimulate American purchase of Japanese raw silk, which is so important to the economic welfare of Japan. This will, in turn, help greatly to stabilize the exchange between the United States and Japan, not to speak of many other beneficial influences, among which we may point to the prevention of the price of raw silk from falling phenomenally, as has been often witnessed in the past. That such a turn of events spells glad tidings for millions of our farmers is beyond the slightest doubt."

Recent Developments in the Japanese Cotton Industry.*

THE history of the cotton spinning industry in Japan during the years 1931 and 1932 is one of the swift alternations of of prosperity and depression

(1) During the first eight months of 1931 the industry was steadily recovering from the depression into which it had been plunged by the raising of the gold embargo in January, 1930 and the world wide stagnation of trade The mills had reduced costs by improved methods of operation and lower wages and were again operating at a profit

(2) Then in September, 1931, occurred two events which upset all calculations—Great Britain s abandonment of the gold standard and the Manchurian affair The first seriously affected the competitive power of Japanese goods in foreign markets The second was followed by the Chinese boycott, which for a time almost closed to Japan her best market,

(3) On December 13, 1931, Japan re enforced the embargo on gold exports, and exchange, which had stood at par with the United States and at a 50 per cent appreciation with Great Britain, dropped to a heavy discount A false boom followed, but, inasmuch as it was not accompanied by any increase in trade, soon collapsed,

(4) March to July, 1932, was a period of disillusionment and low prices, but with the decline of the yen the export trade was steadily growing,

(5) The second half of 1932 was a period of great activity Aided by a falling exchange Japan increased her sales of piece goods in Asia, Australia, Africa and the Near East, and more than overcame the handicap of reduced sales to China

It is advisable that this question of exchange should not be allowed to obscure the underlying cause of the expansion of Japan's overseas trade in piece goods Undoubtedly the falling exchange has stimulated exports, but the raw cotton has to be paid for in foreign currency, and the value of the lower yen in terms of the raw material has been to some extent neutralized by the drop in prices of American cotton in the second half of 1932 Without high standard of efficiency combined with surprisingly low costs Japan could not have achieved the remarkable expansion of her trade in piece goods in 1932

The other side of the picture is the home market Owing to the depression of the preceding years, the serious economic plight of the farmers and of local banks the buying power of the Japanese public was at a low ebb in 1932 Nor has the new industrial activity added appreciably to the well-being of the masses Wages have hitherto risen very little while the cost of living is going up The public therefore find difficulty in paying the higher prices and home sales have fallen off Incidentally it appears likely that with the rise in the price of commodities wages will have to be increased and costs generally will rise

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* Extracted from " Economic Conditions in Japan " H M Stationery Office, London

Fortunately for the industry the export trade is booming and what has been lost in the home markets has been regained overseas It has been estimated that whereas about 60 per cent of the production was formerly consumed in Japan, now 60 per cent of the output is being exported

Imports of Raw Cotton —According to the Customs returns, imports for eleven months of 1932 compared with imports for the same period of 1931 and 1930 are as shown in the following table —

	(million lbs) 11 months of 1932	1931	1930
British India	342	614	597
U S A	1 122	582	469
Egypt	37	33	22
China	60	85	81
All other	4	2	10
Total	1 565	1 316	1 179

The remarkable increase in the use of American cotton will be noticed In some degree this is due to the spinning of finer counts, but it was mainly caused by the fact that American parity prices were cheaper than Indian

A large proportion of this cotton was obtained under favourable conditions, since the mills bought heavily before Japan went off the gold standard and continued to buy before the exchange slumped

It might seem that the total consumption of raw cotton has increased remarkably since 1930 The increase is not, however, so great as the figures would indicate, since stocks are large Actual consumption during the three years has been —

	(500 lb bales)
1930	2 361 000
1931	2 422 000
1932	2 578 000 (estimate)

Purchases of the 1932 crop up to the end of December seem to indicate that Japan will return this year to what has in the past been considered the normal proportion of rather more Indian than American cotton Nothing is more remarkable than the facility with which Japan seems to switch from the one to the other In 1931 Japan imported 6 lbs of Indian cotton to every 5 lbs of American In 1932 she imported only 3 lbs of Indian cotton to over 10 lbs of American In 1933 she is expected to go back to the 1931 proportion It might be thought that the change could not be effected without temporary loss of efficiency and differences in quality But no such effects are apparent This talent of the Japanese spinner has been commented on more than once but it can scarcely have ever been put to such a test as in the last few years

Spindleage and Rate of Curtailment of Output —During 1931 and 1932 the rate of curtailment has been as follows —

January—March 1931	34 per cent
April—June 1931	31 per cent
July—October 1931	2 per cent
November 1931—September 1932	31 per cent
October—December 1932	36 per cent

From January, 1933, the rate has been lowered to 31 per cent for the next six months It is to be noted that the method of computing the rate is somewhat complicated the rates above quoted indicate what is regarded as the effective rate

In the last three years the leading companies have been vigorously overhauling their mills Many of these were getting antiquated With characteristic enterprise the companies in spite of trade depression, set themselves to bring them up to date, introduced modern systems of drafting and also bought more spindles It is generally understood that many of the spindles sealed under curtailment are out of date and would not in any case be used except in times of extraordinary prosperity

While on the subject of equipment it may be well to point out that bleaching and finishing plant has been greatly extended in the last few years, both by the spinning and weaving companies and by independent concerns In the opinion of competent observers Japanese printing and dyeing compare not too unfavourably with that of the leading countries and that at costs which, in spite of the cost of material, are really remarkably cheap

Output of Yarn —The output of yarn from July, 1931, to June 1932, was as follows —

	Coarse Counts	20 s Counts	Medium Counts	Fine Counts	Total
Bales	822 547	896 196	876 820	151 246	2 746 809
Percentage	29 9%	32 6%	32%	5 5	

The proportion of fine counts shows an increase from two years earlier, when it was rather less than 4 per cent After steadily declining for some time past, exports of yarn again increased amounting for eleven months of 1932 to nearly 34 million lbs of which British India took half Yarn production increased steadily, while domestic consumption remained unchanged Exchange being low, conditions were therefore favourable to export There was a large increase in fine counts to India, where the import duty weighs more heavily on coarse counts

Exports of Cotton Piece Goods —The remarkable expansion of foreign trade in piece goods is shown by the following table —

	Exports of piece goods (1 000 sq yds)	
	Japan	Great Britain
January 1932	89 425	179 859
February	106 538	180 492
March	148 147	202 385
April	135 741	199 286
May	160 056	200 958
June	175 613	184 773
July	195 239	198 278
August	208 291	180 706
September	199 935	177 421
October	200 398	138 447

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* A cable received recently by the International Cotton Federation from the Japan Cotton Spinners Association fixed this figure at 20 per cent

Exports from Great Britain during the same period are added for purposes of comparison By August Japan had established a record in exports and had passed the United Kingdom total

During 1930 and 1931 the average monthly export from Japan was 131,000 and 118,000 square yards respectively The drop in 1931 was due to poor trading at the end of the year, from causes already referred to By January, 1932, one cause—high exchange—had disappeared, but the other—the Chinese boycott—continued During 1932 the severity of the boycott lessened gradually, but the results might have proved disastrous to Japan's cotton industry if sales to other markets had not increased enormously —

	Exports of first 11 months of 1932	1931	1930
	(million sq yds)		
To China Kwantung Leased Territory and Hong Kong	289	334	552
To all other markets	1 532	983	692

Exports to Other Countries —Exports to other destinations are shown in the following table —

Country	1932 (11 months	1931 1 000 sq	1930 yds)
British India	592 051	360 412	374 315
Straits Settlements	74 760	39 692	40 776
Dutch East Indies	306 374	196 808	163 700
Egypt	168 372	97 859	97 303
South Africa	33 081	37 819	20 667
Australia	31 544	18 816	13 003
Turkey	34 541	22 645	17 971
*All other Countries	291 588	209 327	163 570

India has successively raised its import tariff to 50 per cent without any apparent effect in checking the avalanche of Japanese piece goods It has to be remembered, however, that the average prices paid by the Japanese mills for their raw cotton have been very low, since heavy stocks were purchased before Japan went off the gold standard Moreover Indian importers of piece goods laid in big stocks in anticipation of the higher tariffs But even allowing for these factors, a trade of over 590 million square yards in eleven months is a remarkable achievement which must challenge attention (For the whole of 1929 a trade of 581 million square yards was done, but this was at a time when trade all round was good, before the depression set in) On a smaller scale the jump in trade with the Dutch East Indies and with Egypt, and indeed with practically all other markets in Asia (except China) Africa, Australia and the Near East is perhaps even more spectacular Higher tariffs may check this expansion, and Japan's policy of inflation may ultimately cause a rapid rise in costs, but it must be emphasized that the trade increase is not due to cheapness alone, but also to a marked improvement in quality

Exports of Different Kinds of Cloth —Customs returns reveal the change which is taking place from grey goods to bleached and to dyed and printed goods (included in " others ")

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* (not including China etc)

EXPORTS OF PIECE GOODS

	1929	1930	1931	1932 (11 months)
		(1,000 sq yds)		
Grey	816,035	672,435	561,317	679,219
Bleached	128,096	162,891	190,159	318,606
Others	846,129	736,499	662,304	823,270

Comparing the trade of 1932 with that of 1929, exports of greys are considerably less, exports of bleached goods have about trebled, while exports of "others" is slightly larger. As already mentioned, bleaching and finishing equipment is being steadily improved and extended. The Chinese boycott has seriously affected exports of grey cloth, but it is possible also that the limit of expansion may have been almost reached in this line, and future efforts are likely to be directed to bleached and to dyed and printed goods. For the first eleven months of 1932 the export of prints alone amounted to 125 million square yards, as compared with an export of 58 million square yards for the whole of 1928 (a previous record year).

Future Outlook.—In Japan it is popularly thought that the spinning and weaving companies will make big profits in 1933. To what extent this wave of optimism is based on a mere belief that present conditions will continue and to what extent on a reasoned forecast of the future it is hard to say. But what is certain is that the companies have had a very favourable year in 1932. For the most part they are maintaining the same dividend rate, and are adding the increased profits to their reserves, so that financially they are in a very strong position. Some of the leading companies have another source of strength in that the subsidiary rayon companies, of which they own a majority of the shares, have also had a very good year.

THE DEVELOPMENT OF THE RUSSIAN TEXTILE INDUSTRY.

The Soviet second Five-year Plan provides for a large scale extension of the textile industry. It is proposed to increase by more than five million the number of spindles engaged in the production of cotton yarns.

New factories will be constructed either in the cotton-growing regions, or in districts further distant from these centres. At the present moment two large-sized factories, each of about 200,000 spindles are under construction at Tashkent (Uzbekistan) and in Western Siberia.

At the present time the majority of the Russian textile firms are situated in the centre of European Russia, far from the raw-material producing centres, a fact which presents serious difficulties; it occasions costly rail transport and encourages the exodus of the rural population from the country into the towns.

It is with a view to remedying this uneconomic situation that those at the head of affairs in the Soviet have resolved to establish, as far as possible, the industrial centres in the places where the raw material is produced.

PLANS TO ASSIST COTTON AND SILK INDUSTRIES IN CHINA.

Recent information from China states that measures for the relief of the cotton and silk industries were discussed at a meeting in Nanking on May 6th, convened by Mr Chen Kung-po, Minister of Industry, and attended by the various business leaders from Shanghai.

With reference to the relief of the cotton industry, it was decided to make the following recommendations to the Executive Yuan :—

(1) The Government shall make arrangements with State Banks whereby the latter are to grant to cotton mill owners loans to a total amount of $20,000,000 at a low rate of interest. Detailed measures concerning the loans shall be jointly formulated by the Ministries of Industry and Finance.

(2) The Shanghai cotton-mill owners shall form a joint organ for the sale and transportation of their products.

BRITISH INDIA.

INCREASED DUTIES ON COTTON PIECE GOODS OF NON-BRITISH MANUFACTURE

The Indian Government has raised the import duty on cotton piece goods of non-British manufacture.

The new duties increase the import duty on plain grey cotton piece goods of non-British manufacture to 75 per cent *ad valorem*, or 6¾ annas per pound, whichever is the higher, and on other cotton piece goods of non-British manufacture to 75 per cent *ad valorem*.

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MISCELLANEOUS

TEXTILE PRODUCTION IN FOREIGN COUNTRIES

According to the Board of Trade it is not possible to compare the trend of production in each of the respective industries which are included in the general indices of the countries specified, but some information is available regarding textiles The index numbers for this group, on the basis of the average of 1927-1929=100, are shown in the table below

In comparing the relative changes in production as between country and country, it may be noted that the proportion which textiles represent of the total industrial field covered by the general index numbers varies from a very small percentage in the case of Canada to one-third of the total in the case of Japan In Germany and the United Kingdom the proportion is rather less than one-fifth of the total, and in the United States about 10 per cent The material on which the index numbers are compiled also varies considerably, both as regards completeness and reliability The effect on production of stoppages due to disputes in the textile industries should also not be overlooked

It will be seen from the table that during the four years 1929 to 1932 the only countries where the production of textiles was recorded as greater than in the base period were Japan (about 8 per cent greater in 1929 and in 1932) and the United States (3 per cent greater in 1929) In the four years mentioned there were declines in each year in Belgium France, Germany and Poland, the decreases in 1932 as compared with the base period amounting to 41, 36 20 and 40 per cent respectively Comparing the same periods, the decline in the United States was about 27 per cent There was no serious decline in the United Kingdom until 1930 when, as compared with 1929, production fell by nearly 20 per cent , a further decrease occurred in 1931, but was followed by a recovery in 1932, when the index figure was about 15 per cent below that of the base period The production of textiles in Germany in 1927 was over 10 per cent greater than in any subsequent year

INDUSTRIAL PRODUCTION—TEXTILES

(Base period 1927–1929 = 100)

Country	Original Base Period	1927	1928	1929	1930	1931	1932
Belgium	1923 25	98 7	103 0	98 2	80 7	74 2	59 2
Canada	1926	101 1	100 9	98 0	74 4	72 6	73 6
France	1913	95 3	106 0	98 5	91 1	76 0	63 7
Germany	1928	109 7	99 6	90 7	89 6	87 4	79 8
Japan	1927	97 6	94 6	107 8	97 4	98 5	108 4
Poland	1928	101 2	104 0	94 9	73 4	69 3	59 8
United Kingdom	1924	101 6	99 9	98 5	79 5	77 0	85 1
United States	1923 25	101 1	95 8	103 0	81 4	84 2	73 4

ARRANGEMENTS FOR HANDLING COTTON FUTURES IN SPAIN.

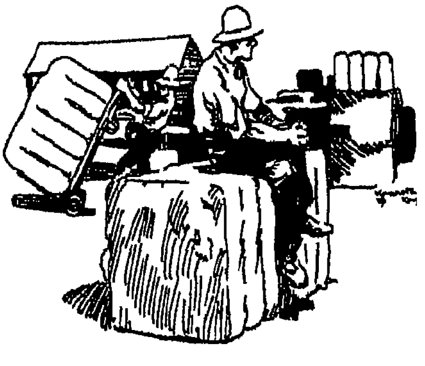
After negotiations extending over a period of a number of months, the Centro de Contratacion de Moneda, which controls the remittance of funds from Spain, has come to an arrangement with the Comite Industrial Algodonero, of Barcelona, where it appears that futures transactions in cotton can now be handled satisfactorily

Although remittances to cover adverse balances, resulting from operations in futures by bona-fide firms actively engaged in the use or manufacture of the commodities involved, have been provided for by the regulations under the condition that advance approval be secured for the remittance, in actual practice, since early in 1932, such transactions have been viewed with such strong suspicion as vehicles of speculation and as affording such opportunities for the export of capital that the policy has been to refuse the necessary authorization

The result has been a severe handicap to the important textile industry centring around Barcelona, and repeated representations have been made by the different trade organizations, an arrangement was concluded early in March whereby the authorizations are to be issued for those transactions which are controlled by the Comite Industrial Algodonero This body has now completed its registers, and from April 1, 1933 it appears that it is definitely in a position to supply the records and information necessary to permit the authorities controlling the exchange to issue the permits

The new arrangement promises to rectify the position in which manufacturers found themselves of not being able to assure themselves of the price of their raw material, but nothing has as yet been done to provide for the payment of past accounts resulting from transactions in cotton futures It is reported, however, that the Centro de Contratacion de Moneda has initiated conversations with the Comite Industrial Algodonero, of Barcelona, to devise some means of closing these out Some of these accounts are understood to date from as far as three years back, and have proved a growing problem for the firms to which balances were owed chiefly in New York and Liverpool

(United States Department of Commerce.)



COTTON TRADE STATISTICS

UNITED KINGDOM.

COTTON YARN EXPORTED FROM THE UNITED KINGDOM

Per Board of Trade Returns (in lbs)

	Grey Unbleached		Bleached and Dyed	
	Six months ended June 30th			
To	1933	1932	1933	1932
Soviet Union (Russia)	—	—	—	1,000
Sweden	1,449,300	1,507,700	38,100	34,300
Norway	1,863,400	3,003,700	68,700	68,700
Denmark	1,498,800	1,221,500	69,100	80,100
Poland (including Dantzig)	1,655,100	872,700	26,600	23,100
Germany	15,240,700	14,871,100	23,900	16,700
Netherlands	6,056,400	10,618,900	27,700	8,600
Belgium	2,509,400	1,783,300	52,100	19,100
France	427,700	514,700	7,400	16,300
Switzerland	1,696,800	1,843,300	3,300	2,400
Italy	256,000	190,600	23,800	1,600
Austria	399,100	423,000	2,500	2,800
Czechoslovakia	513,900	751,800	1,500	400
Yugoslavia	701,400	832,500	117,700	130,600
Bulgaria	363,100	1,030,200	133,900	492,400
Roumania	6,873,300	5,738,200	206,000	403,600
Turkey	436,800	549,100	156,900	115,500
China (including Hong Kong)	776,900	8,959,000	70,900	318,800
United States of America	493,300	509,000	102,300	89,200
Brazil	1,319,100	595,400	179,600	40,400
Argentine Republic	2,139,800	1,363,600	731,400	203,200
British India.				
Bombay via Karachi	5,100	37,500	141,500	147,000
„ Other Ports	446,300	1,322,400	678,800	885,100
Madras	1,776,900	3,438,100	820,900	1,467,900
Bengal, Assam, Bihar and Orissa	905,600	1,241,500	212,200	296,200
Burma	69,100	75,700	226,900	595,100
British Malaya	13,700	160,800	52,500	82,200
Australia	1,128,900	1,271,600	1,654,000	1,554,800
Canada	1,010,800	816,800	101,800	245,500
Other countries	5,888,300	5,517,400	2,204,900	2,044,700
Total ·				
Up to No 40 count	28,540,600	34,330,500	6,259,700	6,753,000
Over No 40 count and up to No 80 count	21,026,000	28,395,400	1,541,900	2,147,800
Over No 80 count and up to No. 120 count	7,566,900	7,451,900	335,200	416,300
Over No 120 count	781,500	883,300	90,100	70,200
Total	57,915,000	71,016,100	8,226,900	9,387,300

COTTON MANUFACTURES EXPORTED FROM THE UNITED KINGDOM

(In square yds.)

	Six months ending June 30th	
To	1933	1932
Sweden	8,465,500	12,716,900
Norway	8,462,800	10,519,800
Denmark	25,440,100	19,395,500
Germany	14,618,100	15,342,700
Netherlands	10,981,000	23,688,600
Belgium	7,590,800	7,015,600
France	1,854,000	1,622,100
Switzerland	33,934,300	22,878,000
Portugal, Azores and Madeira	4,053,400	4,154,200
Spain and Canary Islands	1,686,900	1,725,000
Italy	2,000,800	1,360,500
Austria	2,755,800	3,251,000
Greece	11,985,100	12,118,000
Roumania	6,628,000	7,618,500
Turkey	21,680,400	13,170,000
Syria	3,284,800	4,167,700
Egypt	38,049,500	44,500,900
Morocco	21,975,200	23,604,800
Foreign West Africa	26,925,800	22,868,900
Foreign East Africa	5,059,600	4,521,000
Iraq	8,433,000	27,991,000
Persia	3,250,600	15,019,200
Dutch East Indies	9,818,300	27,302,500
Philippine Islands	1,668,200	2,434,200
Siam	4,312,300	4,542,900
China	24,268,400	56,893,900
Japan	1,360,500	2,955,300
United States of America	5,837,800	5,595,500
Cuba	2,900,200	2,581,400
Mexico	1,437,100	978,100
Central America	9,380,200	4,523,300
Colombia	33,449,200	16,916,700
Venezuela	14,319,800	9,996,000
Ecuador	1,782,300	1,582,000
Peru	2,693,300	4,199,500
Chile	2,048,000	1,493,200
Brazil	2,620,900	1,353,400
Uruguay	6,854,900	4,335,300
Bolivia	392,700	873,200
Argentine Republic	66,632,200	49,896,700
Irish Free State	16,116,300	14,423,200
British West Africa	55,691,700	68,647,300
British South Africa	53,713,200	22,310,300
British East Africa	5,514,700	7,146,400
British India:		
Bombay via Karachi	100,779,500	109,789,700
„ Other Ports	61,506,600	51,594,200
Madras	33,144,900	38,044,700
Bengal, Assam, Bihar and Orissa	79,323,500	58,654,000
Burma	12,353,000	33,964,800
British Malaya	12,450,500	25,741,000
Ceylon	5,503,400	8,159,700
Hong Kong	16,231,200	42,470,600
Australia	75,222,900	78,438,200
New Zealand	16,102,600	18,932,700
Canada	18,360,000	14,452,600
British West India Islands and British Guiana	13,066,400	13,830,200
Other countries	47,135,600	43,646,800
Total	1,083,107,800	1,147,949,400

COTTON MANUFACTURES EXPORTED FROM THE UNITED KINGDOM

Continued

(In square yds)

To	Six months ending June 30th 1933	 1932
Total of grey or unbleached	191,474,100	197,192,100
Total of bleached .	370,083,800	415,383,100
Total of piece goods, printed	186,897,300	192,563,300
Total of piece goods, dyed or manufactured of dyed yarn ..	334,652,600	342,810 900
Total of piece goods of all kinds .	1,083,107,800	1,147,949,400

U.S.A.

IMPORTS OF FOREIGN COTTON, AUGUST 1st, 1932, TO MAY 31st, 1933, WITH COMPARISONS

(500-lb bales)

Country production	1913–14	1928–29	1929–30	1930–31	1931–32	1932–33	5 year average 1927–28 to 1931–32	Per cent. this year is of 5-year average
Egypt	113,339	265,590	214,091	18,422	58,319	54,964	147,830	37 2
Peru	11,175	13,762	10,170	1,883	2,115	3,597	11,014	32 6
China	15,312	38,785	41,852	26,688	6,140	42,898	33,336	128 7
Mexico	41,036	51,940	37,405	10,848	20,436	8	26,692	—
India .	6,507	42,481	50,253	24,813	15,901	2,107	30,062	6 8
Other countries	819	2,764	1,624	1,436	1,483	817	1,792	45 6
Total	188,188	410,322	364,395	84,090	104,294	104,391	253,056	41 2

EGYPTIAN COTTON CONSUMED IN THE UNITED STATES

(Equivalent 500-lb bales)

Month	1924–25	1925–26	1926–27	1927–28	1928–29	1929–30	1930–31	1931–32	1932–33
August .	11,715	16,213	17,629	22,469	18,759	20,285	7,673	5,667	6,230
September	13,523	17,966	22,884	19,795	16,297	17,184	7,915	7,006	6,464
October ..	13,971	17,520	20,812	19,413	20,057	20,107	9,120	6,598	7,858
November	10,127	12,558	16,383	20,507	17,858	18,263	8,980	6,609	7,908
December	16,479	16,105	16,876	18,864	18,003	17,976	10,134	6,509	6,645
January .	18,980	18,408	17,297	20,199	22,325	19,616	7,782	6,611	6,022
February	17,698	19,149	17,042	20,435	19,546	17,036	8,377	6,665	6,258
March ..	17,720	21,778	21,773	17,112	20,615	15,826	8,774	8,263	7,212
April	18,502	18,198	19,527	16,466	20,159	18,156	9,763	6,427	6,217
May .	17,088	16,866	22,146	14,043	20,484	15,017	8,630	6,908	9,319
June ..	17,876	14,676	26,045	13,951	18,046	13,278	8,898	6,026	—
July .	17,865	14,577	21,354	13,130	20,343	11,761	7,740	6,085	—
Total	191,544	204,113	239,768	217,384	232,392	205,765	104,095	70,104	—

STOCKS OF AMERICAN COTTON AT EUROPEAN PORTS

(*Compiled from commercial reports*)

At	June 12, 1914	June 10, 1927	June 15, 1928	June 14, 1929	June 13, 1930	June 12, 1931	June 10, 1932	June 9, 1933	5-year average*
				(in thousands of bales)					
Liverpool	769	1,008	359	523	298	410	279	356	414
Manchester	49	140	58	68	59	87	119	59	78
Continent	775	1,065	796	568	641	852	653	902	702
Total ..	1,593	2,213	1,413	1,159	998	1,349	1,051	1,317	1,194

* 1928–32

EXPORTS OF AMERICAN COTTON, AUGUST 1st, 1932, TO MAY 5th, 1933, WITH COMPARISONS

(Compiled from Government and commercial reports)

To	Aug. 1, 1913– May 8, 1914 bales	Aug. 1, 1929– May 9, 1930 bales	Aug. 1, 1930– May 8, 1931 bales	Aug. 1, 1931– May 6, 1932 bales	Aug. 1, 1932– May 5, 1933 bales	4-year average 1929–32 bales	Per cent. this year is of 4-year average Per cent.
Great Britain ..	3,204,271	1,209,335	1,004,878	1,133,890	1,140,145	1,280,327	89·8
France	1,047,907	797,557	909,745	406,185	746,874	719,383	103·8
Germany ..	2,647,003	1,665,690	1,545,647	1,448,006	1,510,078	1,616,131	95·3
Italy	427,794	632,602	437,162	568,523	668,061	563,269	118·6
Japan	336,902	939,236	1,041,169	2,079,493	1,386,220	1,307,543	106·0
Russia	86,241	78,040	29,279	—	—	74,603	—
Spain	243,428	234,106	214,751	239,779	267,199	232,221	115·1
Belgium ..	180,342	162,230	129,721	119,424	161,186	151,728	106·2
Canada	123,511	167,438	173,837	154,069	141,739	179,881	78·8
Other countries..	231,846	477,480	*649,022	†1,457,909	‡725,823	765,413	94·8
Total ..	8,529,245	6,363,714	6,135,211	7,608,178	6,786,325	6,890,799	98·5

* Includes 298,734 bales to China.
† Includes 247,435 bales to China.
‡ Includes 964,919 bales to China.

ESTIMATED PRODUCTION OF RAYON YARN BY COUNTRIES AND PROCESSES (IN THOUSANDS OF LBS.), FIRST QUARTER, 1933

(Supplied by The Textile and Engineering Press Bureau, Limited)

Country	Viscose	Acetate	Cupra	Collodion	Total
Austria..	175	—	—	—	175
Belgium	2,310	110	—	—	2,420
Brazil	285	90	—	—	375
Britain	14,695	2,805	495	—	17,995
Canada..	1,450	350	—	—	1,800
Czecho-Slovakia ..	1,365	—	—	—	1,365
France	11,725	925	—	—	12,650
Germany	15,105	615	1,960	—	17,680
Holland	5,655	—	—	—	5,655
Italy	18,315	460	440	—	19,215
Japan	18,310	—	330	—	18,640
Poland	1,780	—	—	—	1,780
Spain	1,365	—	—	—	1,365
Sweden	100	—	—	—	100
Switzerland	2,825	70	—	—	2,895
United States ..	29,335	4,200	990	1,330	35,855
Total	124,795	9,625	4,215	1,330	139,965

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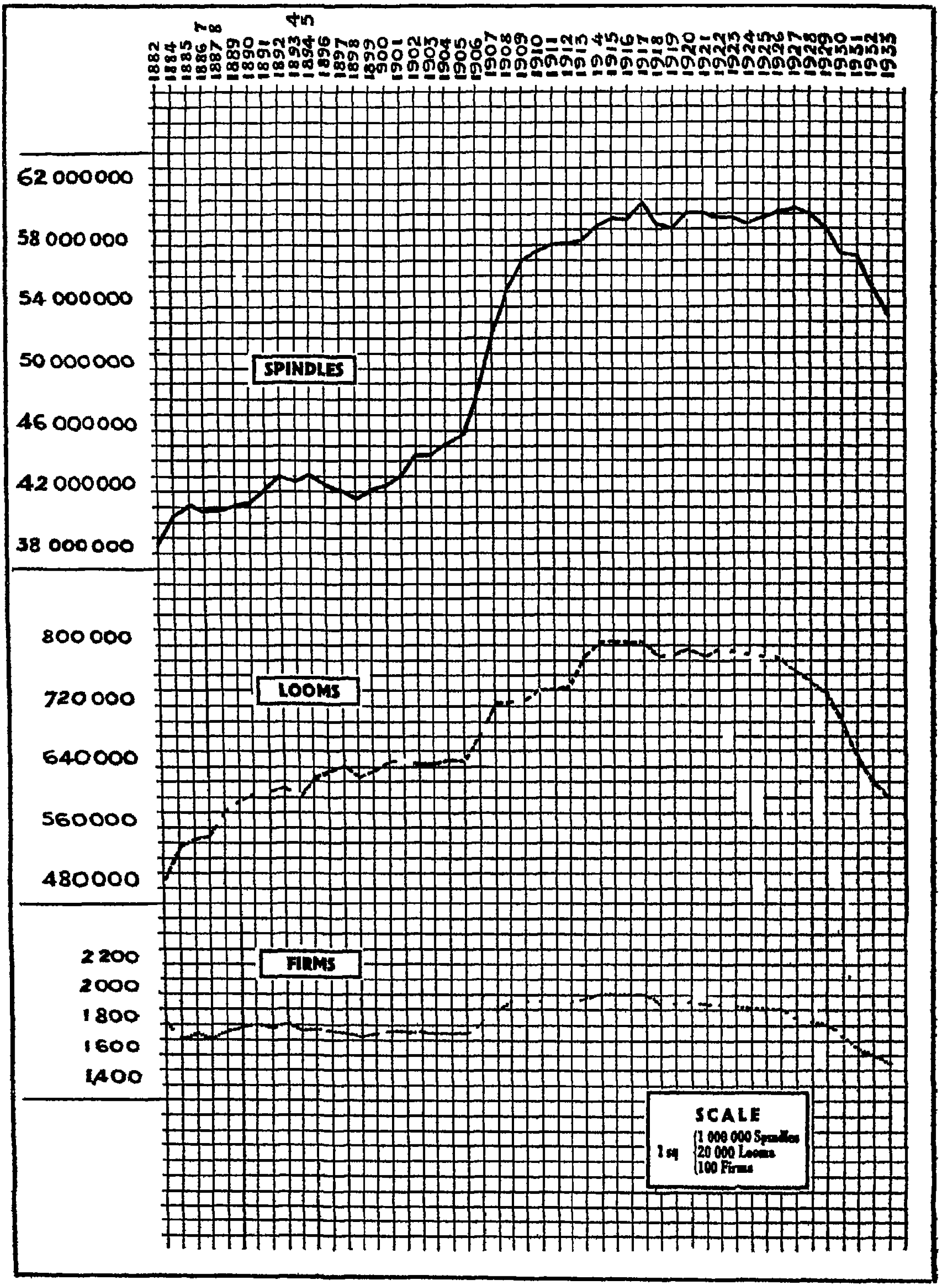

thoroughly comprehensive and reliable reference book and directory

It contains a very complete and up to date list of the cotton spinners, doublers, manufacturers, bleachers, dyers and finishers situated in Lancashire

The extent and severity of the factors responsible for present conditions in the cotton trade are reflected in a graph showing the fluctuations in the number of firms, spindles and looms in Lancashire over the past 50 years, which we reproduce here by courtesy of the publishers

As will be seen, a close similarity can be traced in the rise and fall of the respective curves The peak was reached in 1914-17 In 1917 the industry had in operation 60,973,381 spindles and 807,543 looms, owned by 2,004 Lancashire firms

Regarding the figures for 1917 as 100 per cent , the correlative percentages for 1933 are as follows Spindles, 87 8 per cent , looms, 74 5 per cent , firms, 78 2 per cent

There are now 1,568 cotton spinning and manufacturing firms in Lancashire This is 41 less than twelve months ago, and is actually the lowest total since these figures were first available The total number of mule and ring spindles (including doubling spindles) in the cotton industry is given as 53,558,180, which shows a decrease of 1,898,314 on the corresponding period last year The decrease, however, is slightly less than that shown between the figures for 1931-32, which totalled 2,137,605

The total number of looms now in commission is stated to be 601,750 This shows a decrease of 22,879 on the previous year's figures, and is the lowest total since 1889

BOOKS RECEIVED

"ECONOMIC AND TRADE CONDITIONS IN AUSTRALIA" Report by A W Burton, Assistant to H M Trade Commissioner at Melbourne Published for the Department of Overseas Trade by H M Stationery Office Price 4s 6d net

"ECONOMIC CONDITIONS IN CZECHO SLOVAKIA" Report by H Kershaw, O B E , Commercial Secretary to H M Legation, Prague Published for the Department of Overseas Trade by H M Stationery Office Price 2s net

"ECONOMIC CONDITIONS IN JAPAN" Report by G B Sansom, C M G , Commercial Counsellor, H M Embassy, Tokyo, and D W Kermode, Acting Commercial Secretary, H M Embassy, Tokyo Published for the Department of Overseas Trade by H M Stationery Office Price 3s 6d net

"ECONOMIC CONDITIONS IN THE NETHERLAND EAST INDIES" Report by H A N Bluett, O B E , Commercial Agent, Batavia Published for the Department of Overseas Trade by H M Stationery Office Price 4s 6d net

"ECONOMIC CONDITIONS IN THE ARGENTINE REPUBLIC" Report by Stanley G Irving, Commercial Counsellor, H M Embassy, Buenos Aires Published for the Department of Overseas Trade by H M Stationery Office Price 5s net

"ECONOMIC CONDITIONS IN THE NETHERLANDS, 1932" Report by R V Laming C B E , Commercial Secretary to H M Legation, The Hague Published for the Department of Overseas Trade by H M Stationery Office Price 3s 6d net

"TECHNOLOGIE DER TEXTILFASERN IV/4", Koenig Zelle, Weltwirtschaft der Baumwolle Published by Verlagsbuchhandlung Julius Springer, Linkstrasse, 23 24, Berlin, W 9 Price, RM 20 50

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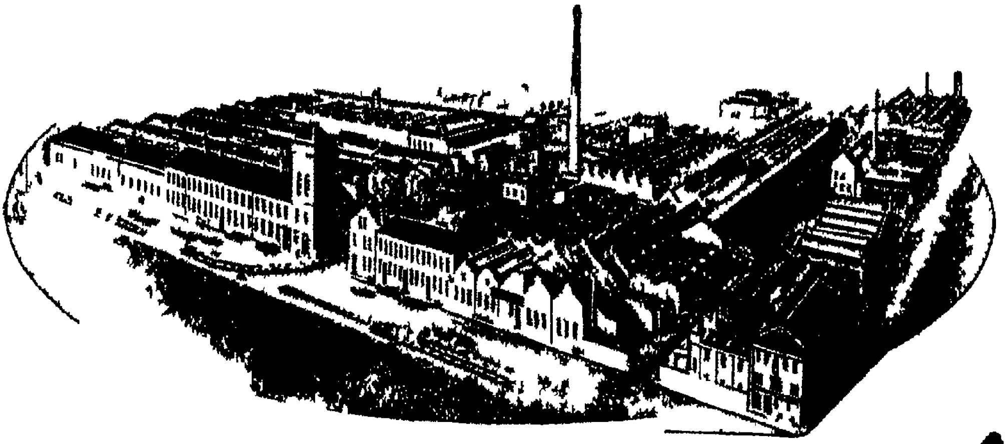

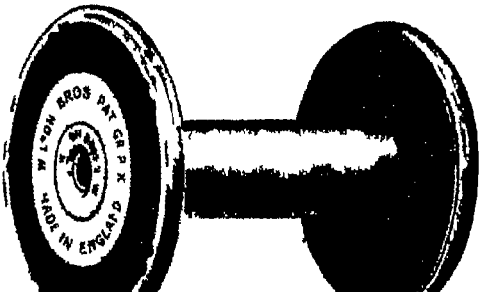

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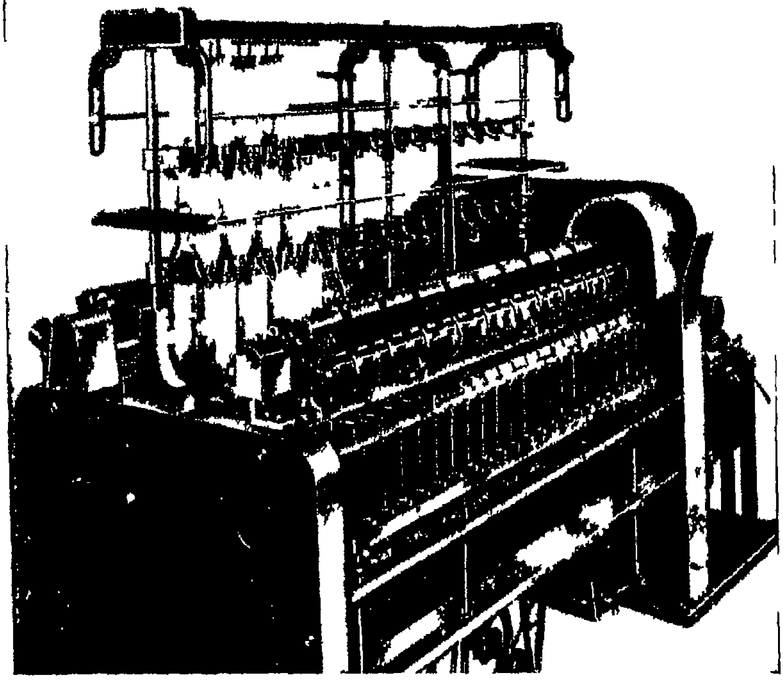

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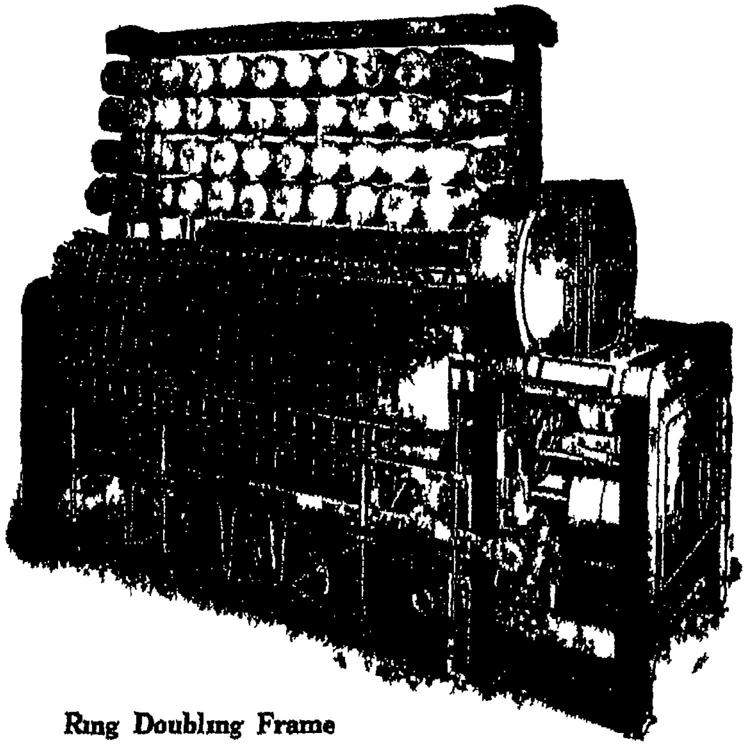

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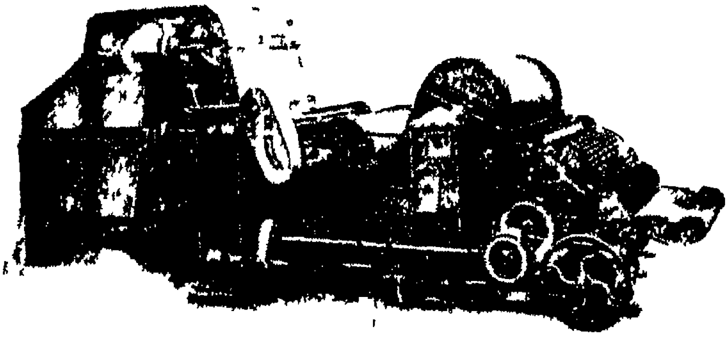

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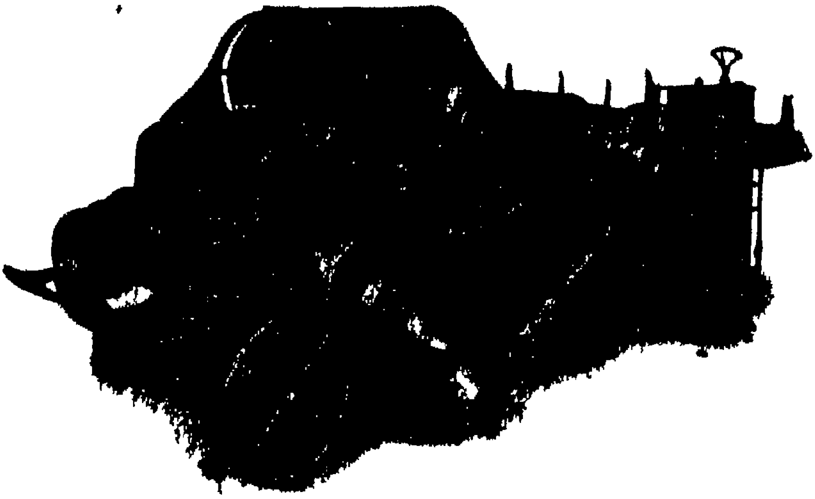

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